November 1997

MONTHLY LABOR REVIEW

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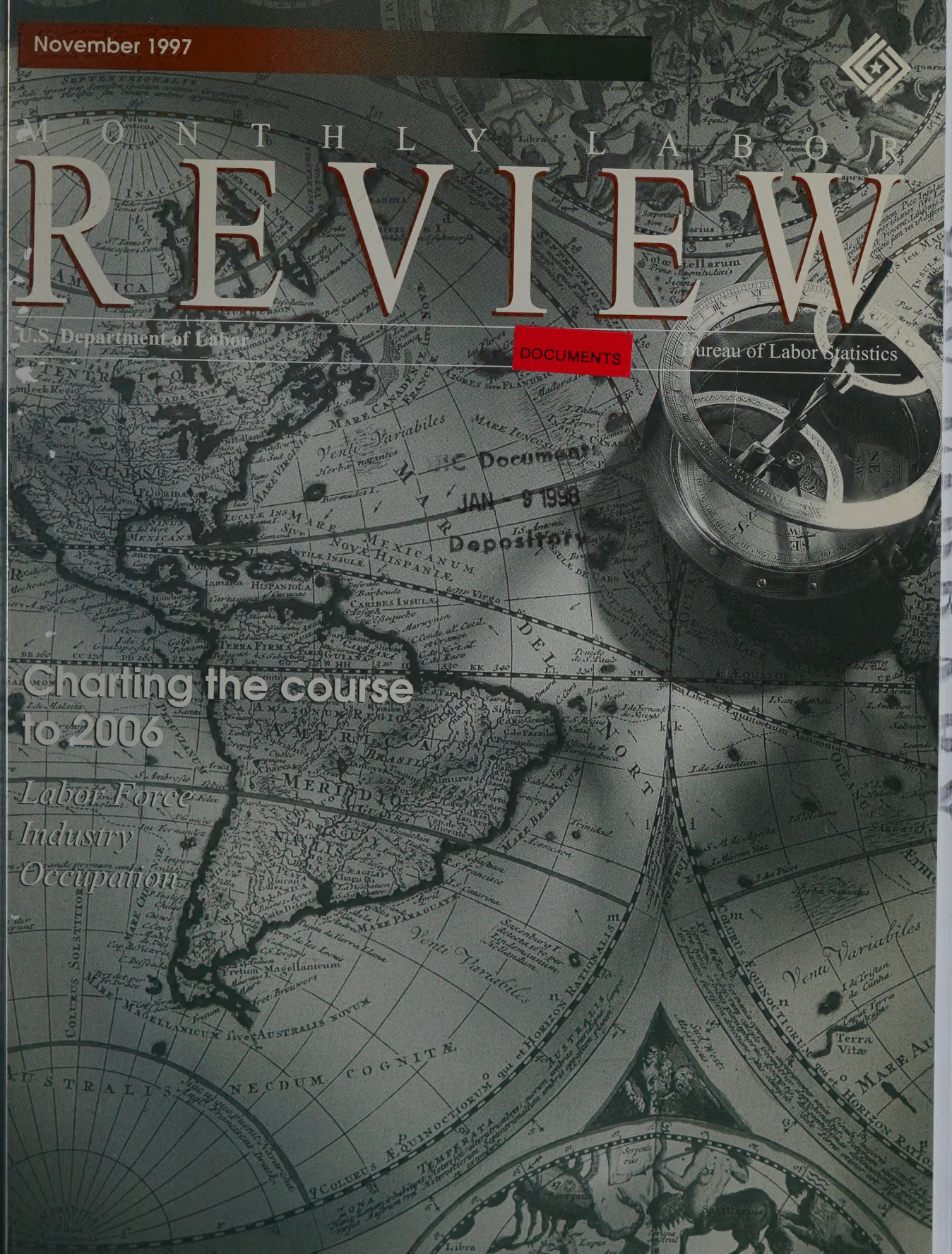

Charting the course to 2006

Labor Force

Industry

Occupation

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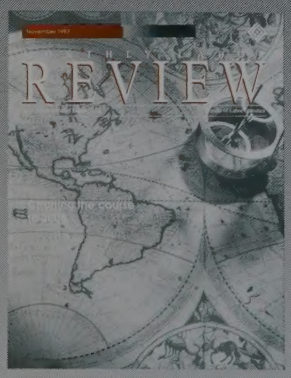

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The November *Review*

The biennial release of new employment projections is a major publishing event for the Bureau of Labor Statistics. In addition to the series of articles that appear in *Monthly Labor Review*, there are several substantial pieces that are published through the Bureau's Special Publications Branch. The most popular of these is the *Occupational Outlook Handbook*, a perennial best seller. The *Handbook* is a job-by-job analysis of the nature, working conditions, training qualifications, earnings, and employment outlook for about 250 occupations and summary information for several dozen more. The new edition should be available for sale in the first quarter of next year.

Other, less well-known parts of the package include *Career Guide to Industries, Occupational Projections and Training Data*, and a BLS bulletin, this year entitled *Employment Outlook: 1996–2006*. These publications, plus a special issue of *Occupational Outlook Quarterly*, all are based on the projections presented in this month's *Review*. It is important, therefore, to understand the methods underlying these analyses and the conceptual purpose of the various alternative estimates presented along with them.

First, these are projections of current trends in the economy, not point forecasts of the specific course of any of the projected variables. Second, as Charles Bowman explains, our past practice of presenting low-growth, moderate-growth, and high-growth alternatives led to the assumption by some that the low-to-high difference represented the Bureau's projection of a range within which specific variables would fall. This assumption was also not true. To avoid such misinterpretation, these scenarios have been replaced by sensitivity analyses of selected variables to differences in key assumptions. Finally, when looking at the sensitivity analyses, we should pay particular attention to the assumptions that can affect all the projections in significant ways: the impact of immigration, the role of international trade, and the influence of new technologies.

Layoffs and stock prices

The tough, shareholder-value driven executive who cuts staff in ailing establishments in order to improve the firm's stock price is a modern day stereotype. But how well does the layoff strategy work? Not all that well, at least not for ailing firms in Canada, according to Morley Gunderson, Anil Verma, and Savita Verma's report in the spring 1997 issue of *Relations Industrielles—Industrial Relations*.

The three analyzed a sample of 214 layoff announcements by major Canadian firms over the period 1982–89, and the response of the firm's share prices on the Toronto Stock Exchange. They found that "bad news" announcements of layoff in reaction to insufficient demand, low profitability, or labor disputes led to a substantial decline in the market value of the firm. On the other hand, layoffs perceived to be proactive—consolidation of facilities to better meet future demands, for example—led, on average, to a marginal increase in the value of the firm.

Most of the negative responses occurred on the day of the announcement and the immediate following day. The authors interpret this as suggesting that the stock market may not fully anticipate the new information, but is capable of reacting very quickly to it.

Looking at the pieces

One benefit of attending meetings of such groups as the National Association for Business Economics (NABE) is the chance to find out what practicing economists are saying about developments on their own regional patch. At NABE's annual meeting in September, a full session was devoted to regional issues The most visible themes of the panel were rankings and variations among various parts of the country. Mark Vitner of First Union Corporation characterized the Southeast as the leading attractor of investment—about half of all manufacturing investment from overseas and about 40 percent of all sites selected for new or expanded sites of all kinds, according to his sources. Within the region, he noted a great deal of variation in unemployment as rates are very low in the central Piedmont, but range into double digits in the more rural areas.

Similarly, Howard L. Roth of Bank of America found that while in terms of aggregate job growth California has improved from 47th place a few years ago to eighth at the time of his report, there are significant differences within the State. For example, while San Francisco, Orange County, and San Diego were all doing quite well, Los Angeles had still not recovered the jobs lost in the 1990-91 recession. And Sara L. Johnson from DRI/McGraw-Hill noted that employment growth rates in the Northeast varied from 3.7 percent in New Hampshire to one-half of one percent in Maine, Rhode Island, and New York. Unemployment rates in the region varied from the Nation's fifth lowest (New Hampshire) to the third highest (New York).

In addition to looking at the pieces, one must pay some attention to the completed puzzle. This fell to Mark Zandi, of Regional Financial Associates. Somewhat against the grain of the other presentations, he argued that, while significant variation still existed, there was significantly less variation in regional economic performance over the past 30 years and the regions are looking more and more alike in terms of economic and industrial structure.

The December *Review*

Next month's issue discusses earnings inequality, services jobs, and worker displacement. □

Employment outlook: 1996–2006

BLS projections to 2006—a summary

New projections of the occupational, industrial, and demographic structure of the labor force present a detailed look at the U.S. economy in 2006

Charles Bowman

Every 2 years, the Bureau of Labor Statistics updates its employment outlook for the coming decade. Four articles in this issue present a detailed picture of U.S. employment trends as they are likely to evolve over the next several years. While broadly similar to the projections released in the November 1995 *Monthly Labor Review*, the revised outlook differs in numerous details concerning the occupational, industrial, and demographic structure of the U.S. work force.

The gradual slowdown in the rate of labor force expansion continues to be one of the fundamental forces shaping the employment outlook. The slowdown is itself a reflection of very long-term swings in fertility and a gradual playing out of the dramatic change in labor force participation, particularly among women, which characterized much of the 70s and 80s and led to such far-reaching social and economic changes. At the same time, immigration has become an increasingly important source of population and labor force growth, moderating to some degree the slowing of population and labor force growth.

Howard Fullerton projects that the labor force will increase by about 15 million persons (or 11 percent) over the next 10 years, reaching 149 million by 2006. (See pages 23–38.) By comparison, the labor force expanded by some 16 million persons (or 14 percent) over the past 10 years. While overall change in the labor force will be modest, significant shifts are expected in its demographic structure. Increases will be concentrated among older age groups, as baby-boom cohorts swell the ranks of workers between ages 45 and 64. For the first time in 25 years, the number of young workers (16 to 24) will be growing faster than the overall labor force. Finally, a decline is expected in the number of those in the 25 to 44 year age range over the next 10 years. The net result will be a continuation of the aging of the labor force seen in the previous decade. By 2006, the median age of the labor force will approach 41 years, a level not seen in the United States since the 1960s.

Women will continue to increase their share of the labor force, although at a slower rate than in the past. Labor force participation for women overall is projected to rise by about 2 percentage points, half the increase of the preceding decade. The increase will be particularly marked among women ages 45 to 64 who represent the leading edge of the baby-boom generation and, hence, have tended to replace women with much lower levels of labor force attachment as they moved through the age distribution. By 2006, women's share of the labor force will increase by just 1.2 percentage points, to 47.4 percent, compared with increases of 1.7 points between 1986 and 1996, and 4 points between 1976 and 1986.

Charles Bowman is chief of the Division of Industry Employment Projections, Bureau of Labor Statistics.

Changes from past procedures used to develop projections

Projection period. Over the past four decades, the Bureau of Labor Statistics has developed projections in which the target year always ended in a zero or five. Projections were prepared every other year, resulting in at least two and sometimes three sets of projections being prepared for the same target year. As a consequence, the projection horizon could be as short as 10 years or as long as 15 years. This procedure caused some confusion among users as to which set of projections was the proper set to use. In addition, some concerns were raised about the validity of projections that were for a period longer than 10 years. To address these concerns, the BLS has changed its procedure. Beginning with the 1996–2006 projections presented in this issue of the *Review,* projections will always be developed for a 10-year period. Thus, the next set of projections, to be published in November 1999, will cover the 1998–2008 period.

Alternatives. Since the early 1980's, three alternative scenarios (low growth, moderate or base-case growth, and high growth) were developed for each major segment of the projections. While most of the analytical effort was devoted to the preparation of the moderate (base-case) alternative, the low-growth and high-growth scenarios were based on variations in key economic variables, such as labor force participation, immigration, defense expenditures, exports, and imports. In translating these alternative assumptions into employment projections, however, no changes were made to significant structural factors that could affect industry and occupational employment, such as input-output coefficients and the industry staffing patterns.

In general, users of projections focused primarily on the moderate (base-case) industry employment and occupational employment projections. However, those who did use the low-growth and high-growth alternative projections often assumed that the difference between those alternatives represented a range within which the BLS expected the employment projection to fall. That assumption was not valid, as the procedures used to develop those alternatives were not intended for that purpose. To avoid such misinterpretations, alternative scenarios were not developed for the 1996–2006 projections. Instead, a discussion is presented of the sensitivity of selected economic variables to differences in critical assumptions.

Basic procedures. Methods used to develop the 1996–2006 projections are very similar to those used in recent years. These methods are discussed in the *BLS Handbook of Methods* (Bulletin 2490, April 1997, chapter 13). Additional technical information on procedures and detailed listings of key assumptions are available on the BLS internet site at *http://stats.bls.gov*

Among men, almost all groups will decline in participation, as the overall rate drops by 1.3 percentage points, about the same as in each of the preceding two decades.

Significant compositional shifts are also expected along racial/ethnic lines. Although white non-Hispanics are expected to continue to account by far for the largest share of the labor force in 2006 (73 percent, compared with 75 percent in 1996 and 80 percent in 1986), their rate of growth is considerably below that for the black, Asian, and Hispanic groups. Continued rapid growth of the Hispanic population makes it likely that this group will become the second largest ethnic grouping, replacing blacks, by 2006 or shortly thereafter. The remaining group, Asians and others, also will grow relatively fast, but still will remain a small part of the total.

As the natural increase of the population slows, immigration has become a major factor in determining the prospects for labor force growth. The projections included here are largely based on the Census Bureau's middle population assumptions which include net immigration of 820,000 persons per year. Given the uncertainty surrounding immigration levels over the next decade, an alternative scenario is presented based on the Census Bureau's high immigration (1.2 million immigrants per year) assumption. The results are a labor force that is not only larger, but one which is younger and has a different ethnic mix and higher overall participation rate.

The outlook for economic growth is the subject of the article by Tom Boustead. (See pages 6–22.) He explores, among other issues, the effects of the labor force slowdown on potential output and total employment. Overall, real gross domestic product is projected to increase 2.1 percent per year over the projection period, compared with 2.3 percent over the preceding 10-year period. The slowdown reflects lower employment growth, partially offset by a modest improvement in productivity. While changes in the underlying data make exact comparisons impossible, this is 0.1 or 0.2 higher than the previously projected trend for gross domestic product.

One of the most striking features of the macroeconomic outlook is the growing internationalization of the U.S. economy. By 2006, exports and imports are each expected to approach 20 percent of gross domestic product. Investment spending also shows strong growth, nearly 50 percent faster than the overall economy. Both of these trends are fueled in

large part by strong demand for computers and a broad array of other high technology products.

The projected growth of gross domestic product, slower labor force growth, and a favorable inflation outlook combine to allow the unemployment rate to remain at relatively low levels. The trade and Federal budget deficits also respond favorably to projected economic conditions, with the trade deficit reduced substantially in real terms and the Federal budget deficit virtually eliminated.

Instead of the high- and low-growth alternative scenarios which accompanied earlier projection studies, Boustead analyzes the sensitivity of the macroeconomic outlook to variations in a large number of exogenous and behavioral variables. These results provide users with a glimpse of how different assumptions might affect the growth of the economy and also how variations in key behavioral variables such as productivity, inflation, or the exchange rate might affect other aspects of the economy.

Mirroring the slowdown in labor force growth, total employment is expected to expand more slowly in the 1996–2006 period than in the preceding 10 years. As James Franklin shows in the article on industry trends, the economy is expected to add 18.6 million new jobs by 2006, compared with a gain of 21 million between 1986 and 1996. (See pages 39–57) As was the case in the previous BLS projection, all of this growth occurs in the service-producing sector, including net gains of 3.6 million in business services, 3.2 million in health services, and 2.3 million in retail trade. Although manufacturing shows a slight decline overall, some industries, particularly those benefiting from strong exports and capital spending, show moderation or even reversal of previously projected employment declines.

While the overall picture of industrial structure has not changed dramatically, a number of sectors do show significant changes from previous projections. The computer and data processing services sector, for example, is now expected to add 1.3 million jobs, twice the number previously projected.

The growth and shifting industrial structure of the U.S. economy has major implications for the pattern of occupational demand over the next 10 years. In the final article, George Silvestri presents a detailed description and analysis of these implications. (See pages 58–83.) At the major group level, professionals; managers; technicians; and service, marketing, and sales workers all are expected to increase their share of total employment. Meanwhile, occupational groups such as administrative support; precision production, craft and repair; and fabricators, laborers and operators will experience a declining share.

The shifting industrial structure has a major impact on the relative growth of occupations. The three fastest growing occupations, for example, are computer specialties, reflecting, in large part, the expected rapid expansion of the computer and data processing services industry. Similarly, as a result of rapid employment growth in health services, half of the 30 fastest growing occupations are health care related.

The projections also show that differing growth prospects among occupations have important implications for education. While the economy will continue to generate large numbers of jobs at all educational levels, the results also show that employment in occupations requiring an associate degree or higher will grow considerably faster than those with lesser educational requirements.

THE NEW BLS PROJECTIONS describe an economy which is gradually slowing in response to demographic factors, but is nevertheless expected to produce 18 million new jobs by 2006– as well as a much larger number of job openings to meet replacement needs. The effects of the long-term trend towards service-producing activities is evident, as computer and health-related occupations dominate the list of the fastest growing jobs. On the other hand, the decline in manufacturing jobs seems to have come to at least a temporary halt, as the growing internationalization and computerization of the economy provides significant demand for technology-related manufactured products. Finally, while the economy will generate job opportunities at all educational and skill levels, the increasing role of technology means that the fastest growing jobs are most likely to be those requiring relatively more extensive education and training. □

Employment outlook: 1996–2006

The U.S. economy to 2006

Slowing GDP growth is tied to slowing labor force growth; exports and imports continue to be the fastest growing major components of GDP, with high-technology products leading the way

Thomas Boustead

At first glance, the BLS projection of the aggregate U.S. economy for the 1996–2006 period may appear placid, as moderating growth in the labor force constrains economic performance. Real gross domestic product (GDP) is projected to grow at the rate of 2.1 percent per year over the projection period and will reach approximately $8.5 trillion by 2006 in chained (1992) dollars.[1] (See table 1.) By comparison, GDP grew at an average annual rate of 2.3 percent during 1986–96.[2] Nevertheless, the temperate pace of overall economic growth belies activity occurring below the surface.

Over the next 10 years, certain sectors of the economy will undergo dramatic growth, while others will recede in importance. Reflecting increased globalization of the economy, the foreign trade sector will continue to be the fastest growing component of real GDP. Exports are projected to grow almost 3½ times faster than GDP, while imports are expected to rise at almost 3 times the rate of GDP. By 2006, the levels of exports and imports will each approach 20 percent of GDP.

Besides foreign trade, gross private domestic investment (or, simply, private investment) will also assume a more substantial position in the economy over the 1996–2006 period. Private investment is projected to increase at a rate 1½ times faster than the rate for GDP. Underlying the growth in foreign trade and private investment will be an expanding commerce in high technology and computer-related products. Accordingly, the BLS projection anticipates that new markets and new products will be important features of the economy over the next 10 years.

While some sectors of the economy are expected to advance, others will decline in relative importance over the projection period—most notably, the Federal Government. As it has in the recent past, real defense spending (consumption and gross investment) is projected to decline from 1996 to 2006.[3] However, the projection for Federal nondefense spending shows a reversal from recent trends. Unlike the growth rate of 2.0 percent per year posted for 1986–96, nondefense spending is expected to decline 0.8 percent per year from 1996 to 2006. In effect, Federal expenditures will be pressed by efforts to control the Federal deficit in the face of continued growth of transfer payments.

The discussion of the economic projection begins with an outline of key underlying assumptions. The article then examines more closely the projection for the economy over the 1996–2006 period by looking at each sector of GDP in further detail. Lastly, the sensitivity of the projection to changes in underlying assumptions is examined.

Underlying economic assumptions

To generate an economic projection, the Bureau employs a macroeconomic model with nearly 300 exogenous variables.[4] These variables constitute inputs into the model, rather than quantities determined by it. The value of an exogenous variable

Thomas Boustead is an economist in the Office of Employment Projections, Bureau of Labor Statistics.

Table 1. Gross domestic product, by major demand category, 1986, 1996, and projected to 2006

Category	Billions of chained (1992) dollars			Percent distribution			Average annual rate of change	
	1986	1996	2006	1986	1996	2006	1986–96	1996–2006
Gross domestic product	5,489.9	6,911.0	8,539.1	100.0	100.0	100.0	2.3	2.1
Personal consumption expenditures	3,708.7	4,690.6	5,772.9	67.6	67.9	67.6	2.4	2.1
Gross private domestic investment	813.7	1,060.2	1,469.7	14.8	15.3	17.2	2.7	3.3
Exports	362.2	826.1	1,686.0	6.6	12.0	19.7	8.6	7.4
Imports	526.1	940.3	1,749.8	9.6	13.6	20.5	6.0	6.4
National defense consumption expenditures and gross investment	393.4	314.9	257.3	7.2	4.6	3.0	–2.2	–2.0
Federal nondefense consumption expenditures and gross investment	125.2	152.8	141.5	2.3	2.2	1.7	2.0	–.8
State and local consumption expenditures and gross investment	617.0	804.5	1,005.9	11.2	11.6	11.8	2.7	2.3
Residual[1]	–4.1	2.1	–44.4	–.1	.0	–.5	...	...

[1]The residual is calculated as real GDP, plus imports, less other components.

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

generally depends upon a decision into which significant noneconomic factors intrude; for example, security and foreign policy considerations substantially influence the level of defense expenditures. Given these noneconomic influences, many judgments about the level of an exogenous variable could be justified. Accordingly, the sensitivity analysis in this article considers how changes in exogenous variables would affect the economic projection.

Besides exogenous variables, the macroeconomic model contains in excess of 1,150 equations. These equations determine the values of the behavioral variables, as well as establish certain required relationships between variables (so-called identities). The behavioral variables include those of primary interest for aggregate demand and employment, such as real GDP, its components, and the unemployment rate. Additionally, several behavioral variables, such as interest rates and price indexes, play a role in assessing the reasonableness of any particular solution of the model. These are discussed as part of the sensitivity analysis.

For the most part, the more important economic assumptions that go into the model concern exogenous variables. Despite their large number, comparatively few exogenous variables influence markedly the long-term projection of major GDP components and employment. These are summarized in table 2. Several themes interweave the economic assumptions made about those variables, such as the role of the Federal budget deficit in restraining expenditures, the looming importance of transfer payments, and the changing demographic makeup of the U.S. population.

Fiscal policy. Real defense spending has fluctuated substantially in past decades. Following the Vietnam War was a defense drawdown, which led to a trough in real defense spending in 1976. Thereafter, real defense spending surged as successive defense budgets sought to modernize and expand the Armed Forces.

As the Cold War ebbed, the trend in defense spending reversed. Reductions occurred in the number of active-duty personnel, along with the number of active-duty Army divisions, Air Force fighter wings, and naval vessels. Between 1986 and 1996, declines in real defense spending were exemplified by the 2.8-percent annual rate of reduction for defense compensation and the 4.7-percent rate of reduction for defense gross investment. (See table 2.)

The projection supposes that the defense drawdown will persist, although its tempo will diminish. Defense compensation spending is expected to contract 0.9 percent per year between 1996 and 2006, while defense gross investment is projected to fall at an annual rate of 1.0 percent over this period. The fastest declines occur in the first half of the projection period; then, the reductions abate substantially as the need arises to replace or refurbish defense systems purchased in the 1980s.

Whereas the outlook for defense spending roughly tracks experience over the past decade, the same cannot be said for nondefense spending. Here, the impact of the Federal budget restraint appears more pronounced. Between 1996 and 2006, the projection anticipates that real nondefense compensation will fall 0.5 percent per year, while other nondefense consumption expenditures will decrease 2.3 percent per year. In contrast, real nondefense compensation grew 0.1 percent annually between 1986 and 1996, while other nondefense consumption grew 5.2 percent annually over that period.

Despite some deceleration, Federal transfer payments provide a major source of budgetary pressure on Federal defense and nondefense spending. Real medicare spending is projected to grow 3.8 percent per year from 1996 to 2006, compared with the 4.2-percent figure for the preceding 10 years. The projected decline in the medicare growth rate can be attributed, in part, to a temporary slowdown in the growth of the population older than 65.

Grants-in-aid to State and local governments for medicaid

have fluctuated significantly during recent decades. From 1976 to 1986, real medicaid grants increased 2.1 percent per year. However, in the early 1990s, certain practices with regard to obtaining Federal matching funds, as well as expanding enrollment, contributed to soaring growth in medicaid grants. The medicaid program posted annual growth rates exceeding 12 percent each year from 1990 to 1992. By 1996, however, the program's growth had subsided to an annual rate of 2.3 percent. The BLS projection assumes that the rate of real medicaid grants will increase 2.5 percent annually over the 1996–2006 period, slightly in excess of the 1996 rate.

Other real grants-in-aid to State and local governments have not gyrated to the same extent as have grants to medicaid. From 1976 to 1986, other grants decreased 1.7 percent per year. The trend reversed itself, however, over the next 10 years, as aid for such items as refurbishing the interstate highway system spurred Federal grants. The projection views these other grants as prone to budgetary constraints. While, nominally, other grants to State and local governments will increase, the amounts will fail to match inflation over the projection period. Accordingly, from 1996 to 2006, other real grants to State and local governments will shrink 1.4 percent per year.

As regards revenues, the model utilized in the economic projection specifies several tax rates as exogenous variables. These can be either statutory rates, set by appropriate tax laws, or effective tax rates, determined as the quotient of applicable tax receipts and the corresponding taxable income. The projection does not anticipate any major changes in tax rates on corporations or in Social Security tax rates or other indirect taxes, although the trend towards higher State gasoline taxes continues. In the macroeconomic model, the effective Federal personal income tax rate is a behavioral variable. A slight decrease in this rate is expected to occur during the projection period. Together, the revenue and spending assumptions in the projection translate into a balanced Federal budget in the year 2006.[5]

Monetary policy. In a long-term projection, economic growth depends upon the expansion of both the labor force and capital stocks and upon technological progress. Together, these largely determine the size of the working population and the productivity of that population. The influence of monetary factors takes on secondary importance.

Table 2. Major assumptions affecting aggregate projections, 1986, 1996, and projected to 2006

Exogenous variables	Billions of chained (1992) dollars			Average annual rate of change	
	1986	1996	2006	1986–96	1996–2006
Energy related:					
Domestic share of crude-oil acquisitions (as percentage of total acquisitions)	67.4	49.7	36.4	–3.0	–3.1
Electric utility fuel use—coal share (as percentage of total fuel use)	55.7	55.8	56.1	.0	.1
Fuel efficiency, all autos (miles per gallon)	18.4	20.7	22.5	1.2	.8
Tax related:					
Statutory Federal corporate tax rate (as percentage of taxable income)	46.0	35.0	35.0	–2.7	.0
Effective social insurance tax rate[1]	16.8	17.0	17.0	.1	.0
Employer share of Social Security contributions (as percentage of total contributions)	59.7	55.4	54.9	–.7	–.1
Federal gasoline tax (cents per gallon)	10.0	19.2	19.4	6.8	.1
State and local gasoline tax (cents per gallon)	11.8	18.7	26.2	4.7	3.4
Effective State and local corporate tax rates[2]	13.1	7.2	7.4	–5.8	.3
Federal expenditures:					
Defense compensation	153.7	115.9	106.4	–2.8	–.9
Other defense consumption expenditures	131.7	109.6	79.4	–1.8	–3.2
Defense gross-investment expenditures	62.2	38.5	34.9	–4.7	–1.0
Nondefense compensation	60.5	61.2	58.2	.1	–.5
Other nondefense consumption expenditures	38.0	62.8	49.9	5.2	–2.3
Nondefense gross-investment expenditures	14.7	19.3	21.7	2.7	1.2
Grants and transfer payments:					
Federal housing subsidies (current dollars)	13.0	24.8	25.5	6.7	.3
Federal transfer payments, medicare	111.4	168.8	244.3	4.2	3.8
Federal grants-in-aid, medicaid	37.7	79.9	102.0	7.8	2.5
Federal grants-in-aid, other than medicaid	100.6	109.2	94.8	.8	–1.4
Other (in millions, unless otherwise noted):					
Population, including overseas Armed Forces	240.7	265.6	288.7	1.0	.8
Population aged 16 and older	185.3	204.1	225.5	1.0	1.0
Population aged 65 and older	29.0	33.9	36.6	1.6	.8
Nonborrowed reserves (in billions of current dollars)	37.0	49.8	79.9	3.0	4.8

[1] Calculated as the ratio of tax collections and wage and salary disbursements.
[2] Ratio of receipts to applicable tax base.

SOURCE: Historical data, Bureau of Economic Analysis, Bureau of the Census, Bureau of Mines, Energy Information Administration, Federal Highway Administration; projected data, Bureau of Labor Statistics.

The BLS economic projection assumes that monetary policy operates during the projection period in such manner as to stabilize the economy. Short-term interest rates remain within the ranges experienced since the trough of the last business cycle. For example, the Federal funds rate is expected to fluctuate between 4.25 percent and 5.25 percent during 1996–2006. Care, however, must be exercised in interpreting fluctuations in economic variables over the projection period. The macroeconomic model utilized for the economic projection focuses upon long-term trends, so it generally smoothes the time paths of the behavioral variables. Accordingly, the actual path taken by short-term interest rates could easily be more volatile than is suggested by the projection.

Reflecting an expected improvement in the Federal deficit, long-term interest rates are generally projected to trend downwards from 1996 to 2006. For example, the yield on 10-year U.S. Treasury notes for 2006 is anticipated to decline almost 100 basis points from the 6.4-percent average rate experienced during 1996. Other long-term interest rates, such as the yield on 30-year Treasury bonds, are expected to follow a similar pattern.

Demographic assumptions. In a capital-rich country, the growth of the labor force has special significance for the long-term growth of real GDP. The BLS economic projection directly incorporates the Bureau's labor force projection.[6] In addition, the economic projection includes several population assumptions based upon the Census Bureau's middle-series, resident population projection, with adjustment for overseas Armed Forces personnel. While, obviously, these population assumptions have broad implications for the economy, they particularly affect the demand for housing, household furnishings, and automobiles, as well as the level of transfer payments and employment.

The growth rate of the total population is expected to moderate during the projection period, to an average annual rate of 0.8 percent.[7] This contrasts with the 1.0-percent-per-year growth that prevailed from 1976 to 1996. The details of population growth, however, tell a more complex story. Compared with the rate of the preceding 10 years, the growth rate of the population older than 16 shows little change over the projection period, increasing at the same 1.0-percent average rate during both periods. This leveling off of growth differs markedly from the 1.4-percent growth rate in that segment of the population for the period 1976–86.

By contrast, the growth of the population older than 65 is expected to diminish over the projection period, averaging 0.8 percent annually for 1996–2006. This figure falls significantly short of the group's 1.6-percent average annual growth from 1986 to 1996. The deceleration can be attributed to the relatively low birthrates experienced during the Great Depression. As noted earlier, the slower growth of the retirement age population aids in the restraint of transfer payments during the projection period. This trend is, however, short lived: the growth rate for the population older than 65 is expected to accelerate towards the end of the period.

General assumptions. The economic projection assumes that no major wars, natural disasters, or petroleum embargoes will occur during the projection period. Such assumptions are consistent with the projection's long-term focus.

Projected real GDP and its components

As previously mentioned, the BLS projection anticipates that real GDP will increase 2.1 percent per year from 1996 to 2006. Largely because of diminished labor force growth, this projected growth of GDP represents a modest deceleration from the 2.3-percent average growth rate that prevailed from 1986 to 1996. Even though the overall economy is expected to slow somewhat, certain sectors are anticipated to continue to perform strongly during the projection period.

As already noted, the international trade sector will expand substantially during the next 10 years. Private investment in equipment will also increase markedly. Spurring growth in both of these sectors—and, indeed, in all sectors of the private economy—will be strong expenditures on computers and technology-laden products. The following discussion details the projection for the various components of real GDP.

Personal consumption expenditures. Traditionally, personal consumption expenditures have made up the largest and most stable component of real GDP. During the 1970s and 1980s, as the so-called baby boomers began forming households, consumption expenditures rose as a share of real GDP, from approximately 64.9 percent in 1970, to 66.5 percent in 1976, and then to 67.6 percent in 1986 (see table 1). Rising disposable incomes during this period supplied the resources necessary to support the expansion in consumption, which was augmented by declines in the savings rate.

By 1986, the trend in consumption spending began to stabilize. From 1986 to 1996, real personal consumption increased its share of GDP by only 0.3 percentage point, to approximately 67.9 percent in 1996. In terms of growth rates, real consumption expenditures grew only 2.4 percent yearly from 1986 to 1996, following its 3.2-percent annual growth rate in the preceding 10-year period. This slowdown reflects slower growth in disposable income. For example, real disposable income, which increased at a 3.1-percent annual rate from 1976 to 1986, diminished to 2.2 percent annually for the period 1986–96.

The BLS projection envisions a leveling of growth in personal consumption expenditures from 1996 to 2006. Real personal consumption expenditures are expected to grow at an average annual rate of 2.1 percent over the period, matching the 2.1-percent annual growth rate of GDP. As a result, real consumption will amount to approximately 67.6 percent of

Table 3. Personal consumption expenditures, 1986, 1996, and projected to 2006

Category	Billions of chained (1992) dollars			Average annual rate of change	
	1986	1996	2006	1986–96	1996–2006
Personal consumption expenditures	3,708.7	4,690.6	5,772.9	2.4	2.1
Durable goods	448.4	611.5	867.3	3.2	3.6
New autos	114.7	73.5	68.0	–4.4	–.8
New light trucks	41.7	50.7	65.6	2.0	2.6
Other automotive	68.1	97.4	126.4	3.6	2.6
Computers	2.1	61.0	665.9	39.9	27.0
Furniture	142.3	231.1	329.9	5.0	3.6
Other durables	85.7	117.1	144.7	3.2	2.1
Nondurable goods	1,215.9	1,441.9	1,683.8	1.7	1.6
Food and beverages	614.0	704.5	794.4	1.4	1.2
Clothing and shoes	199.9	267.9	349.4	3.0	2.7
Gasoline and oil	102.5	113.7	131.6	1.0	1.5
Fuel oil and coal	13.4	10.3	8.6	–2.6	–1.9
Other nondurables	285.5	346.1	406.4	1.9	1.6
Services	2,041.4	2,638.2	3,239.8	2.6	2.1
Housing	565.5	693.1	787.5	2.1	1.3
Household operation	209.8	283.9	386.6	3.1	3.1
Electricity	68.3	85.0	102.1	2.2	1.8
Natural gas	26.7	31.0	31.4	1.5	.1
Other	114.7	167.8	250.8	3.9	4.1
Transportation	145.7	184.8	225.2	2.4	2.0
Medical services	510.3	697.9	874.7	3.2	2.3
Other services	608.5	778.9	968.9	2.5	2.2

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

GDP in 2006. The projection for consumption anticipates growth in real disposable income over the 1996–2006 period at a 1.9-percent annual rate, which is a decline from the rate for 1986–96.

Although real personal consumption spending proceeds leisurely according to the BLS projection, not all sectors of consumption will conform to this pace. Most notably, the projection contemplates rapid growth in real personal consumption expenditures on computers. (See table 3.) Spending on computers grew 39.9 percent annually from 1986 to 1996. From 1996 to 2006, expenditures on computers are projected to slacken to a 27.0-percent average annual growth rate. This reduced rate still allows real consumption spending on computers to expand from $61 billion in 1996 to $666 billion in 2006 in chained (1992) dollars.

In nominal terms, personal consumption expenditures on computers grew 15.7 percent annually, on average, between 1986 and 1996; by contrast, the projection anticipates an 8.3-percent average growth rate over the 1996–2006 period. As a result, nominal expenditures on computers are expected to reach $49.6 billion by 2006.[8] The large discrepancy between real and nominal expenditures on computers highlights their price behavior. In effect, technological progress and, to a lesser extent, foreign competition have caused, and presumably will continue to cause, a substantial reduction in computer prices.

Besides expenditures on computers, personal consumption expenditures on durable goods include spending on new autos, new light trucks, other automotive products, furniture, and other durable goods. To a significant extent, demographics influence these categories. For example, the earlier mentioned decline in the growth rate of the population older than 16 over the 1986–96 period translated into a sharp drop in the growth rate of expenditures on new autos. During that period, real personal consumption of new autos diminished at an annual average rate of 4.4 percent. Besides the influence of population, a pronounced move by consumers to new light trucks in lieu of autos reinforced the drop in auto expenditures. Between 1986 and 1996, real expenditures on new light trucks grew at an average annual rate of 2.0 percent.

Paralleling the pattern for the population older than 16, the decline in consumer expenditures on new autos is expected to level off during 1996–2006, to a rate of reduction of about 0.8 percent per year. Strong growth, however, is projected to continue for new light trucks, at a rate of 2.6 percent yearly over the period.

Personal consumption expenditures on furniture include spending not merely on household furniture, but also on such furnishing items as china and glassware, as well as household audio and video products. These categories posted substantial real growth in 1986–96, with an annual growth rate of 5.0 percent. Because the growth in the number of households is expected to slacken from 1996 to 2006, and because some import penetration occurs, the BLS projection anticipates a reduction in the growth of personal expenditures on furni-

ture, to an average rate of 3.6 percent per year, over the period.

Real personal consumption expenditures on other consumer durables cover such miscellaneous durables as recreational vehicles, ophthalmic goods, and jewelry. This category of personal consumption grew 3.2 percent per year from 1986 to 1996. The projection contemplates reduced growth for these products, at the rate of 2.1 percent annually, for the period 1996–2006.

In recent decades, consumer spending on nondurable energy-related products has lagged behind expenditures on other consumer goods and services. Apparently, the high energy prices of the 1970s and early 1980s instilled in consumers a concern for conservation and an interest in energy-efficient purchases. For example, real consumption expenditures on gasoline and oil increased only 1.0 percent yearly between 1986 and 1996, a decrease from the 1.3-percent average annual growth rate for the 1976–86 period. The slower growth in the more recent period occurred despite substantially lower real prices for imported oil, compared to the earlier period.

Although the BLS projection assumes a gentle upward trend in real imported oil prices over the next 10 years, these prices remain far below earlier peaks. Accordingly, the projection anticipates a small increase in the growth rates of nondurable energy-related products. The rate of growth of personal consumption expenditures for gasoline and oil would accelerate to 1.5 percent, on average, annually for 1996–2006. Similarly, it is expected that there will be some arresting of the rate of reduction in consumer expenditures on fuel oil and coal, as the 2.6-percent average annual rate of reduction experienced between 1986 and 1996 moderates to a 1.9-percent annual rate of decline for the 1996–2006 period.

Besides energy-related purchases, consumer expenditures on nondurable goods revolve around a variety of subsistence goods such as food, cleaning products, and clothing. Obviously, demographics primarily drive these purchases, although increases in disposable income enhance the demand for higher quality products, particularly clothing. Expenditures on food and beverages are projected to increase 1.2 percent yearly from 1996 to 2006, somewhat slower than the 1.4-percent annual rate of increase for the period 1986–96. Similarly, real consumption expenditures on clothing and shoes are expected to increase 2.7 percent yearly from 1996 to 2006, down from the 3.0-percent average annual growth rate for the 1986–96 period and in line with the deceleration of total population growth. The projection anticipates analogous declines in the growth rate of spending on other nondurable goods during the 1996–2006 period.

Over the past 20 years, the growth of personal consumption spending on services has outpaced the growth of total personal consumption. For example, from 1976 to 1996, real consumption spending on services grew 0.2 percentage point faster than the annual growth rate of total personal consumption. This difference was maintained, even though the growth of personal consumption spending on services slowed from 3.4 percent yearly over the period 1976–86 to 2.6 percent annually during 1986–96.

The growth of personal consumption spending on services is anticipated to equal that of total personal consumption over the 1996–2006 period. Both will continue to slow, to a rate of 2.1 percent yearly over the projection period. What accounts for the slowing growth of services, compared with that of other components of personal consumption? As a partial answer to this question, the services sector has not faced the degree of import competition or undergone the amount of technological change experienced by the makers of durable consumer goods. Consequently, prices generally have advanced faster for services than for other categories of personal consumption, and this price pressure has facilitated the deceleration in

Table 4. Gross private domestic investment, 1986, 1996, and projected to 2006

Category	Billions of chained (1992) dollars			Average annual rate of change	
	1986	1996	2006	1986–96	1996–2006
Gross private domestic investment	813.7	1060.2	1469.7	2.7	3.3
Fixed nonresidential investment	548.5	766.2	1132.0	3.4	4.0
Producers' durable equipment	345.9	578.3	935.6	5.3	4.9
New autos	51.9	67.8	85.6	2.7	2.4
Net used autos	–16.5	–25.5	–32.8	4.5	2.6
Office equipment	24.7	140.9	612.0	19.0	15.8
Other equipment	292.6	411.0	557.9	3.5	3.1
Nonresidential structures	203.3	189.6	210.8	–.7	1.1
Public utilities	36.5	36.5	42.7	.0	1.6
Mining and exploration	15.8	12.8	12.5	–2.1	–.2
Buildings and other	150.8	140.3	155.2	–.7	1.0
Fixed residential investment	257.0	276.8	302.7	.7	.9
Residential structures	251.3	269.7	293.4	.7	.8
Landlord durables	5.8	7.1	9.6	2.1	3.0
Change in business inventories	10.9	17.6	41.5	4.9	9.0

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

the growth of services.

Demographics also affect the growth of services, most notably through their influence on housing services. In this regard, a deceleration in the growth rate of the number of households has occurred in recent decades. The rate fell from an average annual figure of 1.8 percent for the period 1976–86 to 1.3 percent for 1986–96. The BLS economic projection assumes that the number of households will grow 1.1 percent yearly from 1996 to 2006. As a result, the growth rate of real housing services is expected to decrease to a rate of 1.3 percent yearly over that period, compared with a 2.1-percent annual rate for 1986–96.

Related to housing services, household operations comprise expenditures on energy-related services to heat and cool homes, as well as spending on a broad class of other services associated with home maintenance. Among the latter expenditures are maintenance spending on water, sanitary, and domestic services, expenditures on telephone services, and spending on homeowners and related insurance. Expenditures on real household operations grew 3.1 percent per year from 1986 to 1996. The BLS projection anticipates no change in the growth of spending on household operations, with the 3.1-percent annual growth rate for this category continuing for the period 1996-2006. Increased spending growth on nonenergy services is expected to compensate for the slower growth in spending on energy services.

A major contributor to overall growth in personal consumption spending on services is the growth of expenditures on medical services. Real consumption spending on medical services increased 3.2 percent per year from 1986 to 1996. Because of an increased emphasis on the containment of medical costs, the growth rate of medical services can be expected to diminish. The BLS economic projection contemplates that real spending on medical services will expand at the rate of 2.3 percent annually over the 1996–2006 period.

Spending on other services also is expected to grow more rapidly than overall personal consumption. Other services include investment counseling and legal and other services. As larger segments of the population approach retirement, these services become increasingly attractive. Spending on other services is projected to grow at an average annual rate of 2.2 percent from 1996 to 2006.

In sum, consumer spending for the 1996–2006 period is projected to grow at the same rate as GDP and remain by far the largest single component thereof. Within the broad category of consumption expenditures, some reallocation of consumer purchases can be noticed. The fastest growth is expected for durable goods. Still, while the services sector is projected to grow somewhat more slowly than in the past, it remains the largest single component of personal consumption expenditures.

Gross private domestic investment. Expenditures by firms on private investment have increased as a percentage of real GDP in recent decades. From approximately 13.8 percent of GDP in 1976, private investment grew to 14.8 percent in 1986 and then to 15.3 percent in 1996. (See table 1.) Similarly, over this period, the annual growth of private investment has outpaced that of both GDP and personal consumption expenditures. Private investment spending increased 4.3 percent annually from 1976 to 1986 and 2.7 percent yearly from 1986 to 1996.

At a finer level of detail, certain trends in private investment become apparent. Most readily visible is the significant growth of equipment spending. Expenditures on producers' durable equipment grew at an average annual rate of 5.9 percent over the 1976–86 period and then moderated to a 5.3-percent average rate from 1986 to 1996, as shown in table 4.

By way of comparison, the growth rate of nonresidential construction has gyrated in recent decades. A period of overbuilding in the early 1980s led to unsustainable growth in nonresidential construction. As rental vacancy rates soared, the rental market for office space collapsed in many locales in the late 1980s. As a result, for the 1986–96 period, nonresidential construction shrank by 0.7 percent annually, on average. In contrast, the importance of demographic factors has tended to smooth the long-term path of residential construction.

The BLS projection envisions a continuation, with some moderation, of the relatively rapid growth of business spending on producers' durable equipment. To an extent, this spending feeds on itself, as equipment purchases generally have shorter useful lives than do purchases of fixed structures. This prompts more investment in equipment, in the form of replacement spending. Producers' durable equipment is projected to expand 4.9 percent annually from 1996 to 2006.

As with personal consumption, computers constitute the most rapidly growing component of producers' durable equipment. Real business spending on office equipment (primarily computers) increased 19.0 percent per year from 1986 to 1996. With plummeting prices, firms replaced existing computers with more and better models. The projection envisions continued strong investment in office equipment at the rate of 15.8 percent annually for the 1996–2006 period.

Real business spending on autos increased at the rate of 2.7 percent per year from 1986 to 1996. This growth rate is expected to slacken somewhat over the 1996–2006 period, to a 2.4-percent annual average rate of growth. The growth of net sales (the opposite of purchases, and thus represented by a minus sign) would also diminish to a 2.6-percent annual growth rate for the period, compared with the 4.5-percent rate that prevailed from 1986 to 1996. With the projected weakness in the private demand for autos, firms will have less incentive to turn over their auto fleets and supply used vehicles.

Other producers' durable equipment makes up the remainder of producers' durable equipment. A diverse category, it includes the traditional staples of manufacturing, such as machine tools, industrial apparatus, and communications equipment. Between 1986 and 1996, this category grew 3.5 percent

Table 5. Exports and imports of goods and services, 1986, 1996, and projected to 2006

Category	Billions of chained (1992) dollars			Average annual rate of change	
	1986	1996	2006	1986–96	1996–2006
Exports of goods and services	362.2	826.1	1,686.0	8.6	7.4
Merchandise	243.6	609.3	1,313.2	9.6	8.0
Foods, feeds, and beverages	27.5	44.6	57.5	4.9	2.6
Industrial supplies and materials	71.2	121.6	185.8	5.5	4.3
Capital goods, except autos	75.3	289.5	881.0	14.4	11.8
Computers	7.9	90.4	669.3	27.7	22.2
Civilian aircraft and parts	19.4	27.1	40.2	3.4	4.0
Other	50.4	185.7	514.9	13.9	10.7
Autos and parts	28.7	61.8	107.8	8.0	5.7
Consumer goods	20.3	67.4	136.7	12.7	7.3
Other merchandise exports	22.1	29.7	47.5	3.0	4.8
Services	120.3	218.0	389.7	6.1	6.0
Imports of goods and services	526.1	940.3	1,749.8	6.0	6.4
Merchandise	425.5	796.8	1,550.3	6.5	6.9
Foods, feeds, and beverages	26.3	32.0	36.3	2.0	1.3
Industrial supplies and materials	118.6	175.5	229.7	4.0	2.7
Petroleum and products	41.4	59.7	88.2	3.7	4.0
Other	76.8	114.1	138.7	4.0	2.0
Capital goods, except autos	66.8	267.6	940.1	14.9	13.4
Computers	5.9	112.2	951.0	34.3	23.8
Other	63.9	167.8	416.0	10.1	9.5
Autos and parts	95.6	120.3	144.8	2.3	1.9
Consumer goods	101.2	164.1	301.5	5.0	6.3
Other merchandise imports	23.8	43.0	79.6	6.1	6.4
Services	100.2	144.1	211.5	3.7	3.9

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

per year. The BLS projection contemplates decelerating growth in other producers' durable equipment, to an average annual rate of 3.1 percent for the period 1996–2006. While some areas of the category will falter, staunch growth in its high-tech components, such as communications equipment, can be expected.

As noted, nonresidential construction suffered greatly from a construction glut in the 1980s. Many markets have managed, however, to work off a significant portion of this construction overhang. Accordingly, the projection envisions a resumption in the growth of nonresidential construction at the rate of 1.1 percent per year for 1996–2006. The largest subcategory of nonresidential construction, buildings and other structures, would closely track the expected performance of the overall sector, with a projected 1.0-percent average annual growth rate for the 1996–2006 period. An acceleration from past growth rates is anticipated for the other subcategories of nonresidential construction. For example, public utility construction recorded no growth for the 1986–96 period. However, as purchasers and suppliers of electric power respond to an increasingly competitive environment brought about by deregulation, construction by public utilities is expected rise to 1.6 percent per year from 1996 to 2006.

Mining and exploration will still see negative growth under the projection for the 1996–2006 period. Still, owing to an expected, if mild, increase in oil prices over the period, the projected 0.2-percent-per-year decline in mining and exploration would represent an improvement over the 2.1-percent average annual rate of decline for the 1986–96 period.

Residential construction is projected to change only modestly from patterns established in the previous decade. While interest rates clearly influence the short-run timing of home purchases, demographics largely control the long-term demand for housing. As noted before, the demographics do not favor a return to the robust 3.0-percent growth rate for residential structures posted in the 1976–86 period. Instead, the decline witnessed over the period 1986–96 in the age groups traditionally thought of as first-time home buyers is expected to continue during the projection period. The projection envisions investment in residential structures increasing 0.8 percent per year from 1996 to 2006, a rate only slightly greater than that for 1986–96.

In sum, private investment is projected to be a bright spot in the economy over the next 10 years. Expenditures on equipment—in particular, purchases of computers—will shine. Nonresidential construction is expected to make something of a comeback, while residential construction continues to be constrained by the shrinking population of first-time home buyers.

Exports and imports. No other sector of the economy has evolved so dramatically in recent decades as the international trade sector. In 1976, neither exports nor imports exceeded 7.0 percent of real GDP. By 1996, exports rose to 12 percent of real GDP, while imports equaled 13.6 percent. (See table 1.) Rapid development in many parts of the globe, as well as con-

scious efforts at opening world markets, have fueled this growth. The BLS projection anticipates further integration of the United States into the world economy: by 2006, exports are likely to constitute about 19.7 percent of real GDP, and imports will amount to approximately 20.5 percent of GDP.

Not only has international trade accelerated in recent decades, but also, the composition of this trade has altered. High-technology products, such as computers and communications equipment, have assumed a more significant position in foreign trade, and trade in services has become more pronounced.

The international trade sector is a difficult sector of the U.S. economy to project. The problem is primarily, but not exclusively, in projecting the growth of exports. Generally, export growth depends upon the internal growth rates of foreign countries. For example, in recent years, exports to Europe have suffered from slow growth in several important countries. In the upcoming decade, European countries will confront the problems of labor market flexibility, as well as the need to adjust their economies to a monetary union (assuming that it occurs).

Growth rates in developing countries can also be difficult to project. In general, these countries have less diversified economies. With certain exceptions, the service sectors of their economies have lagged behind the manufacturing sectors. As a result, the performance of developing countries' economies can be adversely affected if overcapacity arises in their primary manufacturing industries.

With these cautionary notes in mind, the BLS projection envisions a continuation of the solid growth in U.S. exports of goods and services. Exports grew at the rate of 8.6 percent per year from 1986 to 1996. Exports of merchandise led the way, with a 9.6-percent average annual rate of growth for this period. (See table 5.) Exports are projected to grow at a 7.4-percent annual rate during 1996–2006, with merchandise exports advancing 8.0 percent annually over the period.

Exports of capital goods are expected to show the fastest growth, with the computer component in particular expanding at a 22.2-percent average annual rate from 1996 to 2006. Other capital exports, which include exports of such technology-intensive products as communications equipment, also are projected to grow rapidly in this period. Growth in exports of services is anticipated to decline slightly, from the 6.1-percent-per-year rate posted from 1986 to 1996 to a 6.0-percent annual rate for the 1996–2006 period.

Imports of goods and services are expected to accelerate from the 6.0-percent annual growth rate seen over the 1986–96 period. The BLS projection anticipates an increase in this growth rate to an average annual rate of 6.4 percent for 1996–2006. Historically, there is nothing unprecedented about this rate of growth for imports, which expanded 6.5 percent per year for the period 1976–86.

Imports of merchandise will account for the bulk of the increased growth in imports. The projection contemplates that imports of merchandise will grow 6.9 percent per year over the 1996–2006 period, compared with the 6.5-percent growth rate that prevailed from 1986 to 1996. As with exports, the strongest growth will be in capital goods, especially nonautomotive capital goods. This category includes not only computer imports,

Table 6. Federal Government receipts and expenditures, 1986, 1996, and projected to 2006

Category	Billions of dollars			Percent distribution			Average annual rate of change	
	1986	1996	2006	1986	1996	2006	1986–96	1996–2006
Receipts	850.1	1,576.3	2,431.9	100.0	100.0	100.0	6.4	4.4
Personal tax and nontax payments	358.3	673.1	1,023.3	42.1	42.7	42.1	6.5	4.3
Corporate profits tax	83.9	197.4	304.7	9.9	12.5	12.5	8.9	4.4
Contributions for social insurance	354.7	615.3	965.0	41.7	39.0	39.7	5.7	4.6
Indirect business tax	53.2	90.5	139.0	6.3	5.7	5.7	5.5	4.4
Expenditures	1,027.6	1,701.9	2,432.7	100.0	100.0	100.0	5.2	3.6
Defense consumption	272.7	304.7	348.2	26.5	17.9	14.3	1.1	1.3
Nondefense consumption	89.7	156.0	194.5	8.7	9.2	8.0	5.7	2.2
Transfer payments	399.2	764.5	1,334.4	38.8	44.9	54.9	6.7	5.7
To persons	386.2	748.0	1,307.4	37.6	43.9	53.7	6.8	5.7
Social Security	193.6	342.1	565.9	18.8	20.1	23.3	5.9	5.2
Medicare	75.6	197.2	441.2	7.4	11.6	18.1	10.1	8.4
Federal retirement	42.2	69.9	116.0	4.1	4.1	4.8	5.2	5.2
Other	20.5	26.4	36.7	2.0	1.6	1.5	2.5	3.3
To foreigners	12.9	16.5	27.0	1.3	1.0	1.1	2.5	5.0
Grants-in-aid	107.6	213.3	315.0	10.5	12.5	12.9	7.1	4.0
Medicaid	25.6	93.3	184.2	2.5	5.5	7.6	13.8	7.0
Other	82.0	120.0	130.8	8.0	7.0	5.4	3.9	.9
Net interest paid	130.5	233.5	208.0	12.7	13.7	8.6	6.0	–1.1
Net subsidies	28.0	30.1	32.7	2.7	1.8	1.3	.7	.8
Wage accruals less disbursements	.0	.0	.0	.0	.0	.0	...	...
Surplus or deficit	–177.5	–125.6	–.8	...	...	...	...	...

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

Table 7. State and local government receipts and expenditures, 1986, 1996, and projected to 2006

Category	Billions of dollars			Percent distribution			Average annual rate of change	
	1986	1996	2006	1986	1996	2006	1986–96	1996–2006
Receipts	570.6	1,044.8	1,659.3	100.0	100.0	100.0	6.2	4.7
Personal taxes	101.6	190.7	319.2	17.8	18.3	19.2	6.5	5.3
Corporate profits taxes	22.7	39.0	62.1	4.0	3.7	3.7	5.6	4.8
Social insurance contributions	47.3	74.5	115.8	8.3	7.1	7.0	4.6	4.5
Indirect business taxes	291.5	527.2	847.2	51.1	50.5	51.1	6.1	4.9
Grants-in-aid from Federal Government	107.6	213.3	315.0	18.9	20.4	19.0	7.1	4.0
Medicaid	25.6	93.3	184.2	4.5	8.9	11.1	13.8	7.0
Other grants	82.0	120.0	130.8	14.4	11.5	7.9	3.9	.9
Expenditures	475.7	951.3	1,554.7	100.0	100.0	100.0	7.2	5.0
Consumption	412.7	714.1	1,113.3	86.8	75.1	71.6	5.6	4.5
Transfer payments	111.8	309.2	538.6	23.5	32.5	34.6	10.7	5.7
Medical care	46.0	170.9	333.3	9.7	18.0	21.4	14.0	6.9
Social insurance	33.8	86.2	148.8	7.1	9.1	9.6	9.8	5.6
Other	31.9	52.1	56.5	6.7	5.5	3.6	5.0	.8
Net interest paid	–40.7	–44.9	–40.4	–8.6	–4.7	–2.6	1.0	–1.0
Subsidies less current surplus	–3.0	–13.4	–30.2	–.6	–1.4	–1.9	16.2	8.5
Less dividends received	5.1	13.7	26.7	1.1	1.4	1.7	10.3	6.9
State and local surplus	94.9	93.5	104.6	...	...	...	...	...

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

which are expected to expand 23.8 percent per year from 1996 to 2006, but also other capital goods, which are projected to grow 9.5 percent annually. Imports of services are anticipated to grow 3.9 percent per year during the 1996–2006 period, somewhat faster than they did in 1986–96.

Real exports are expected to grow at a faster rate than real imports. This implies that the trade position of the Nation will improve over the projection period, as measured by real net exports. In fact, the projection anticipates a deficit in net exports of $63.8 billion for 2006, in 1992 chain-weighted dollars. This compares with a deficit in net exports of $114.2 billion in 1996 and $163.9 billion in 1986 (both in 1992 chain-weighted dollars). In each instance, however, a large services surplus fails to offset an even larger merchandise deficit.

In sum, the international trade sector for the United States can be characterized by ever-increasing volume, revolving especially around high-technology products. Given the fast growth of exports, an improvement in the U.S. trade position in real terms can be expected over the next decade.

Government. In the recent past, the Federal budget deficit has garnered significant attention in most discussions of Federal expenditures. At times, this can distract from details, as budgetary discipline implies more than just revenue measures or spending reductions. Given certain categories of mandatory spending, budget restraint can result in a change in the composition of expenditures. In fact, over the next 10 years, the projection envisions budgetary restraint shifting both the level and makeup of Federal spending.

As noted earlier, the projection contemplates a balanced Federal budget in the year 2006. In effect, continued restraint of expenditures would more than offset a decline in the growth rate of receipts. Federal receipts are projected to grow 4.4 percent per year for the 1996–2006 period, compared with a rate of 6.4 percent from 1986 to 1996. (See table 6.) The reduced growth in receipts is seen to result, in part, from a slight reduction in effective personal income tax rates over the projection period and, in larger part, from reduced growth in the applicable tax base. Conversely, Federal expenditures are expected to increase 3.6 percent yearly from 1996 to 2006, as opposed to a 5.2-percent rate for the 1986–96 period. Decreases in the growth of nondefense spending would be a major contributor to this reduction.

The BLS projection anticipates shifts in the composition of Federal expenditures over the 1996–2006 period. Transfer payments are projected to rise to 54.9 percent of Federal expenditures by 2006. This continues a long-term trend, as transfer payments accounted for 38.8 percent of Federal expenditures in 1986 and 44.9 percent in 1996. The primary contributor underlying the growth of transfers is the combined effect of three programs: medicare, Social Security, and medicaid. These programs will make up increasingly larger proportions of Federal expenditures, despite some deceleration in the growth of each. The fastest growing component, medicare, would constitute 18.1 percent of Federal expenditures in 2006, up from its 11.6-percent share in 1996.

The projection envisions State and local governments accumulating significant surpluses over the 1996–2006 period. (See table 7.) In fact, the combined government sector—Federal and State and local—is expected to show a surplus of approximately $104 billion in 2006. Unlike expenditures in the Federal sector, real spending by State and local governments is expected to increase over the period 1996–2006. The reasons for this growth are diverse, but include such factors as expanding school-age and institutionalized populations, as well as the requirement to satisfy various safety and environmental mandates.

Real spending by State and local governments is projected

to increase 2.3 percent annually during 1996–2006. (See table 1.) This growth rate represents a decline from the 2.7-percent annual rate of growth posted for the 1986–96 period, but it still exceeds the 1.8-percent annual growth for the 1976–86 period. As a percentage of real GDP, State and local governments will maintain their position in the economy. In 1996, expenditures by State and local governments constituted approximately 11.6 percent of real GDP. This share is expected to grow slightly, to approximately 11.8 percent of GDP, by 2006.

To a lesser extent, the composition of spending by State and local governments reveals the same trend toward increased levels of transfer payments as exists for Federal spending. While consumption expenditures remain the bulk of State and local spending, consumption is projected to make up a smaller and smaller percentage of total nominal spending. Nominal consumption by State and local governments is expected to account for 71.6 percent of total nominal expenditures in 2006, down from 75.1 percent in 1996 and 86.8 percent in 1986.[9] (See table 7.) Conversely, transfer payments are anticipated to represent an increasing share of total nominal expenditures, reaching 34.6 percent of State and local nominal expenditures in 2006, up from 32.5 percent in 1996 and 23.5 percent in 1986.

In sum, as gauged by the deficit, both levels of government would be in improved positions in 2006. In fact, viewed together, the Federal Government and State and local governments would be contributing to the Nation's flow of savings. Past this point, the analogy becomes problematic. State and local governments provide substantially different services, afford different types of transfer payments, and face far different restraints on their ability to finance spending than does the Federal Government. This said, it is still the case that both the Federal Government and State and local governments would confront the issue of maintaining other programs in the face of the rising demand for transfer payments.

Income, employment, and productivity. In recent decades, direct payments to labor have accounted for an ever-diminishing portion of personal income. In 1986, wages and salaries constituted 58.0 percent of personal income. (See table 8.) By 1996, the share had dropped to 56.3 percent. The BLS projection anticipates that this trend will continue for the period from 1996 to 2006, with the percentage of personal income represented by wages and salaries decreasing to 54.9 percent of personal income.

Table 8. Personal income, 1986, 1996, and projected to 2006

Category	Billions of dollars			Percent distribution			Average annual rate of change	
	1986	1996	2006	1986	1996	2006	1986–96	1996–2006
Sources								
Personal income	3,647.5	6,452.8	10,339.6	100.0	100.0	100.0	5.9	4.8
Wages and salaries	2,116.6	3,630.1	5,671.6	58.0	56.3	54.9	5.5	4.6
Private	1,719.9	2,988.9	4,713.9	47.2	46.3	45.6	5.7	4.7
Government	396.6	641.1	957.6	10.9	9.9	9.3	4.9	4.1
Other labor income	216.0	436.2	768.8	5.9	6.8	7.4	7.3	5.8
Group health contributions	121.2	290.1	537.2	3.3	4.5	5.2	9.1	6.4
Other	94.8	146.1	231.6	2.6	2.3	2.2	4.4	4.7
Proprietors' income	267.8	518.1	801.8	7.3	8.0	7.8	6.8	4.5
Rental income	42.3	127.2	264.1	1.2	2.0	2.6	11.7	7.6
Personal dividend income	105.1	230.6	400.4	2.9	3.6	3.9	8.2	5.7
Personal interest income	543.3	738.0	1,046.9	14.9	11.4	10.1	3.1	3.6
Transfer payments	518.6	1,080.1	1,873.1	14.2	16.7	18.1	7.6	5.7
Less social insurance contributions	–162.1	–307.6	–487.1	–4.4	–4.8	–4.7	6.6	4.7
Uses								
Personal income	3,647.5	6,452.8	10,339.6	100.0	100.0	100.0	5.9	4.8
Tax and nontax payments	459.9	863.8	1,342.5	12.6	13.4	13.0	6.5	4.5
Personal consumption	2,892.7	5,152.0	8,439.4	79.3	79.8	81.6	5.9	5.1
Personal interest payments	90.4	146.3	261.3	2.5	2.3	2.5	4.9	6.0
Transfers to foreigners	8.1	16.2	21.4	.2	.3	.2	7.2	2.8
Personal savings	196.5	274.4	275.0	5.4	4.3	2.7	3.4	.0
Addenda								
Disposable income	3,187.6	5,588.9	8,997.1	...	...	...	5.8	4.9
Disposable income, in chained (1992) dollars	4,087.0	5,088.4	6,154.3	...	...	...	2.2	1.9
Per capita disposable income	13,245.6	21,046.1	31,165.2	...	...	...	4.7	4.0
Per capita disposable income, in chained (1992) dollars	16,983.0	19,161.1	21,317.9	...	...	...	1.2	1.1

SOURCE: Historical data, Bureau of Economic Analysis, Bureau of the Census; projected data, Bureau of Labor Statistics.

Table 9. Labor supply and factors affecting productivity, 1986, 1996, and projected to 2006

Category	Levels			Average annual rate of change	
	1986	1996	2006	1986–96	1996–2006
Labor supply (in millions, unless otherwise noted):					
Total population	240.7	265.6	288.7	1.0	.8
Population aged 16 and older	185.3	204.1	225.5	1.0	1.0
Civilian labor force	117.8	133.9	148.8	1.3	1.1
Civilian household employment	109.6	126.7	140.9	1.5	1.1
Nonfarm establishment employment	99.3	119.5	137.3	1.9	1.4
Unemployment rate (percent)	7.0	5.4	5.4	–2.6	–.1
Wage and salary employment cost index (index)	.9	1.3	1.7	3.4	3.1
Productivity:					
Nonfarm labor productivity (index)	.9	1.0	1.1	.7	1.2
Gross domestic product per employee, in chained (1992) dollars	50,090.1	54,543.8	60,610.7	.9	1.1

SOURCE: Historical data, Bureau of Economic Analysis, Federal Reserve Board, Bureau of Labor Statistics; projected data, Bureau of Labor Statistics.

Business-related income has also drifted downwards as a percentage of personal income in recent decades. Together, the components of business-related income—proprietors' income, personal dividends, interest income, and rental income—made up 26.3 percent of personal income in 1986, but only 25.0 percent in 1996. Business-related income is projected to fall to 24.3 percent of personal income in 2006.

As these traditional sources of income have declined in importance, transfer payments have become an increasingly substantial source of personal income. In 1986, transfer payments, net of personal Social Security contributions, composed 9.8 percent of personal income, a proportion that rose to 12.0 percent in 1996. According to the BLS economic projection, net transfer payments will amount to 13.4 percent of personal income in 2006.

The recipients of personal income are projected to employ it in much the same manner as in recent decades. In other words, they will spend it. The projection anticipates that personal consumption will rise to 81.6 percent of personal income in 2006, up from 79.8 percent in 1996 and 79.3 percent in 1986. As in recent years, savings would bear much of the brunt of increased consumption.

On a per capita basis, nominal disposable income is expected to rise 4.0 percent annually from 1996 to 2006 and reach approximately $31,000 by 2006. This compares with a 1996 figure of approximately $21,000. In real terms, per capita disposable income will grow 1.1 percent annually over the projection period. This projected growth rate is consistent with an expected rise in productivity. Accordingly, real standards of living would rise modestly over the projection period, at least as measured by disposable income.

As previously noted, the economic projection smoothes the business cycle, but does not impose a uniform growth rate over the projection period. The rate of unemployment fluctuates during the period, although the projected 5.4-percent unemployment rate for 2006 is not atypical. Overall, civilian household employment increases 1.1 percent per year from 1996 to 2006, as measured by the Current Population Survey. (See table 9.) Accordingly, the projection envisions an average gain in employment each year of about 1.4 million persons during 1996–2006, compared with an average gain of 1.7 million persons per year over the period 1986–96.

The labor force is projected to grow more slowly over the next 10 years. The civilian labor force grew 2.1 percent per year from 1976 to 1986 and 1.3 percent annually from 1986 to 1996. However, the population makeup is expected to shift toward age groups with lower labor force participation rates. Consequently, the labor force is anticipated to grow only 1.1 percent per year from 1996 to 2006.

As previously mentioned, the growth rate of real GDP is expected to decrease over the projection period. (See table 1.) The declining growth of the labor force explains much of this deceleration: the growth of the labor force accounts for 1.1 percent of the 2.1-percent average annual growth of the economy anticipated for 1996–2006. This leaves approximately 1.0 percent of the projected growth rate to be explained by other factors, such as changes in the quality of the labor force, changes in the quality and quantity of available capital, changes in utilization rates of labor and capital, and improvements in establishments' underlying technical efficiency, all of which can be roughly lumped together under the rubric of "productivity."

The prospects for productivity generally appear promising. The projection anticipates that real GDP per employee, a rough measure of productivity, will grow 1.1 percent per year over the 1996–2006 period. This represents an increase of 0.2 percentage point over the 0.9-percent average annual growth rate that prevailed from 1986 to 1996. More sophisticated measures of productivity, such as nonfarm labor productivity, show similar increases.

To an extent, then, the economy is expected to accommodate slowing growth of the labor force by becoming more productive. But what underlies the growth in productivity? A substantial factor must be the continued growth of capital stocks resulting from projected rates of investment, especially in the area of producers' durable equipment. In sum, the projection contemplates that a portion of the effect of a decelerating labor force growth rate will be offset by increased capital stocks.

Sensitivity analysis

Reviewing an economic projection requires circumspection. By lending an appearance of concreteness, the numbers can overinform. But, in actuality, more than a modicum of uncertainty surrounds the assumptions that underlie a projection. Judgment must be exercised concerning the anticipated levels of numerous economic variables, such as certain components of Federal expenditures, tax rates, transfer payments, population levels, oil prices, and other variables that, in one way or another, influence the outcome of the projection.

Needless to say, reasonable minds may differ on the proper levels of these variables. Such divergent viewpoints would naturally lead to different paths for the economy over the projection period. The crucial question is, of course, *"How* different?" The following discussion attempts to answer that question by examining the sensitivity of various projected variables to changes in underlying assumptions.

In general, two types of assumptions must be made as part of the projection process. First, values must be assigned to the exogenous variables—that is, those variables determined outside of the model. Once assigned, the value of an exogenous variable remains fixed throughout the projection. Second, the level or growth paths of certain so-called behavioral (or endogenous) variables must be examined because of the role they play when one assesses a particular projection.

In a long-term projection, the economy presumably should not be far from equilibrium. Accordingly, in assessing a particular projection, an important question is whether the projection portrays an economy at or near equilibrium. Because prices play a central role in equilibrating a market economy,

Table 10. Percent change in projected values for 2006 resulting from a 10-percent increase in selected exogenous variables (except 1 percent where noted)

Variable	Percent changes in projected 2006 levels						
	GDP, chained (1992) dollars	Disposable income, chained (1992) dollars	Employment (household survey)	Unemployment rate	Housing starts	Yield on 10-year U.S. Treasury notes	Exchange rate (index)
Energy related (changed 10 percent):							
Domestic share of U.S. crude-oil acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electric utility fuel use, coal share	−.1	−.1	.0	−.1	.1	−.4	.1
Fuel efficiency, all autos	−.1	.0	.0	−.4	−.1	1.0	−.2
Tax related (changed 10 percent):							
Federal corporate tax rate	−.2	−.4	.0	.0	.7	−3.7	.5
Effective social insurance tax rate	.1	−1.2	.0	−1.5	2.8	−13.6	2.0
Employer share of Social Security contributions	−.2	.3	−.1	.9	−.4	5.2	−.9
Federal gasoline tax	.0	.0	.0	−.1	.1	−.4	.1
State and local gasoline tax	.0	.0	.0	−.1	.0	.1	.1
Effective State and local corporate tax rates	.0	.0	.0	.1	.0	.0	.1
Federal expenditures (changed 10 percent):							
Defense compensation	−.2	.1	−.1	.8	−.1.1	5.8	−1.0
Other defense consumption expenditures	−.1	.0	−.1	.9	−.6	3.3	−.6
Defense gross-investment expenditures	.0	.0	.0	.1	−.2	.6	−.2
Nondefense compensation	−.1	.1	.0	.6	−.7	3.3	−.5
Other nondefense consumption expenditures	−.1	.0	.0	.5	−.4	2.1	−.4
Nondefense gross-investment expenditures	.0	.0	.0	.2	−.1	.7	−.1
Federal housing subsidies	.0	.0	.0	.1	−.1	.5	−.1
Grants and transfer payments (changed 10 percent):							
Federal transfer payments, medicare	−.1	.7	.0	.8	−1.6	9.1	−1.2
Federal grants-in-aid, medicaid	−.2	.3	−.1	1.2	−1.3	7.4	−1.4
Federal grants-in-aid, other than medicaid	−.1	.1	.0	.5	−.6	3.1	−.4
Other (changed 1 percent):							
Population, including overseas Armed Forces	.1	.1	.1	.3	.1	.0	.0
Population aged 16 and older	.8	.4	1.1	.2	2.5	−8.1	2.1
Population aged 65 and older	−.2	.0	−.2	.3	−.8	3.3	−.7
Nonborrowed reserves at Federal Reserve banks	.1	.0	.0	−.1	.0	−1.1	−.7

this question reduces to whether the path of projected prices appears reasonable in the aggregate.

Now, what constitutes "reasonable" can be debated. The sensitivity analysis of behavioral variables thus considers how the projection would change if such overall price measures as the GDP price index, the Employment Cost Index, certain interest rates, and the exchange rate were increased. The sensitivity analysis also examines how the projection responds to changes in other behavioral variables that either indicate labor market conditions, such as the unemployment rate and the labor force, or are otherwise of interest.

The exogenous variables are the most amenable to sensitivity analysis, so they receive the majority of attention. By contrast, certain limitations arise from manipulating behavioral variables. The difficulty concerns their relation to the model's structure. Behavioral variables have values determined by the model's equations, rather than being imposed from outside the model; hence, they will be subject to feedback effects.[10] A decision can be made to exclude the variable from the model's solution; but once excluded, a behavioral variable acts like an exogenous variable, and generally, important feedback effects are lost.

Sensitivity of exogenous variables. The macroeconomic model used in the BLS economic projection employs nearly 300 exogenous variables. A large number of these are dummy variables, discrepancy terms, or depreciation rates, which were excluded from the sensitivity analysis, leaving 194 exogenous variables as the subject of the analysis.

The sensitivity analysis consisted of an experiment. Suppose that, instead of the value assigned to an exogenous variable in the base economic projection for the period 1997 to 2006, a value 10 percent larger was assigned each year during that period. By what percentage would certain important target variables change? The sensitivity analysis involved carrying out this experiment 194 times; in each case, one exogenous vari-

Table 10. Continued—Percent change in projected values for 2006 resulting from a 10-percent increase in selected exogenous variables (except 1 percent where noted)

Variable	Percent changes in projected 2006 levels									
	Personal consumption expenditures, chained (1992) dollars			Investment expenditures, chained (1992) dollars			International chained (1992) dollars		Government chained (1992) dollars	
				Nonresidential		Residential				
	Durables	Nondurables	Services	Equipment	Structures		Exports	Imports	Federal	State and Local
Energy related (changed 10 percent):										
Domestic share of U.S. crude-oil acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electric utility fuel use, coal share	–.1	–.1	–.1	–.2	.0	.0	.0	.3	.0	–.1
Fuel efficiency, all autos	–.1	–.8	.0	.1	–.1	–.1	–.1	–.5	.0	.0
Tax related (changed 10 percent):										
Federal corporate tax rate	–.1	–.3	–.2	–.8	–1.3	.2	–.1	–.4	.0	–.1
Effective social insurance tax rate	.1	–.2	–.3	1.0	3.4	2.5	.1	.0	.0	–.2
Employer share of Social Security contributions	–.1	.0	–.1	–.6	–1.1	–.7	–.2	.0	.0	–.3
Federal gasoline tax	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0
State and local gasoline tax	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Effective State and local corporate tax rates	.0	.0	.0	–.2	–.3	–.1	.0	–.1	.0	.0
Federal expenditures (changed 10 percent):										
Defense compensation	–.6	–.3	–.2	–.7	–1.4	–1.4	–.2	–.3	2.7	–.2
Other defense consumption expenditures	–.4	–.1	–.1	–.3	–.7	–.8	–.1	–.1	1.9	–.1
Defense gross-investment expenditures	–.1	.0	.0	.2	.5	–.2	.0	.1	.0	.0
Nondefense compensation	–.3	–.1	–.1	–.4	–.9	–.8	–.1	–.1	1.6	–.1
Other nondefense consumption expenditures	–.2	–.1	–.1	–.2	–.5	–.5	.0	–.1	1.2	–.1
Nondefense gross-investment expenditures	–.1	.0	.0	–.1	–.2	–.2	.0	.0	.6	.0
Federal housing subsidies	.0	.0	.0	–.1	–.1	–.1	.0	.0	.0	.0
Grants and transfer payments (changed 10 percent):										
Federal transfer payments, medicare	–.7	–.1	.3	–.6	–1.7	–1.5	–.2	–.1	.0	–.1
Federal grants-in-aid, medicaid	–.9	–.3	.3	–.5	–1.4	–1.6	–.1	–.2	.0	–.1
Federal grants-in-aid, other than medicaid	–.2	–.1	–.1	–.3	–.8	–.7	–.1	–.1	.0	.5
Other (changed 1 percent):										
Population, including overseas Armed Forces	.1	.1	.1	.0	.0	.1	.0	.1	.0	.0
Population aged 16 and older	1.8	.8	.7	1.0	2.0	3.0	.2	.7	.0	.6
Population aged 65 and older	–.4	–.2	–.1	–.3	–.7	–.9	–.1	–.1	.0	–.1
Nonborrowed reserves at Federal Reserve banks	.1	.0	.1	.4	1.1	.3	.2	.2	.0	.1

SOURCE: See table 2.

Table 11. Selected behavioral variables, 1986, 1996, and projected to 2006

Behavioral variable	Levels			Average annual rate of change	
	1986	1996	2006	1986–96	1996–2006
GDP price index	0.8	1.1	1.4	3.1	2.6
Employment Cost Index, wage and salary	.9	1.3	1.7	3.4	3.1
Nonfarm labor productivity (index)	.9	1.0	1.1	.7	1.2
Unemployment rate	7.0	5.4	5.4	–2.6	–.1
Federal funds rate	6.8	5.3	4.3	–2.5	–2.2
Yield on 10-year U.S. Treasury notes (percent)	7.7	6.4	5.5	–1.8	–1.6
Exchange rate (trade-weighted index)	1.2	1.0	.9	–2.2	–1.0
Industrial R&D expenditures, in chained (1992) dollars	75.8	95.3	136.2	2.3	3.6
Effective Federal personal income tax rate (percent)	11.6	12.8	12.3	1.0	–.4
Price of imported crude oil (dollars per barrel)	14.3	20.5	27.0	3.6	2.8
Labor force (in millions)	117.8	133.9	148.8	1.3	1.1

SOURCE: Historical data, Bureau of Economic Analysis, Bureau of the Census, Federal Reserve Board, Bureau of Labor Statistics, Energy Information Administration, National Science Foundation; projected data, Bureau of Labor Statistics.

able was increased and a new solution to the model generated. In certain cases (for example, total population), a 10-percent change appeared implausible, so a 1-percent change was employed.

Tables 2 and 10 show the values of those variables which generated the most significant results or were otherwise interesting. The values listed in table 10 are the percent changes in the projected level of selected target variables, such as real GDP or the unemployment rate, given the percent increases shown in the exogenous variables. For example, a 10-percent increase each year in defense compensation (an exogenous variable) resulted in a 0.2-percent decrease in real GDP. Now, from table 1, the base projection of real GDP for 2006 is $8,539.1 billion (in 1992 chain-weighted dollars). So a reduction in GDP of 0.2 percent would imply a level of real GDP of approximately $8,522 billion.[11] Similarly, the same 10-percent increase in defense compensation would cause a 0.8-percent increase in the unemployment rate, raising the rate for 2006 from 5.4 percent to 5.44 percent. (See table 9.)[12]

The higher level of defense compensation apparently results in somewhat less real GDP. The reason for this is that, through its effects on the Federal deficit, the increase in defense compensation results in an increase in interest rates. The increased interest rates then drive down real GDP by their effect on durable goods and investment.

The sensitivity analysis emphasizes the importance of demographic factors with respect to real GDP. In the model, the population older than 16 has the strongest influence upon real GDP: a 1.0-percent increase in this population results in a 0.8-percent rise in real GDP. Along with certain other variables, the population older than 16 is used to determine the labor force in the macroeconomic model employed in the BLS economic projection. In turn, the labor force constitutes the most important element in determining the economy's ability to supply output.

Besides affecting the supply of output, a 1.0-percent increase in the population older than 16 has a significant impact upon various components of aggregate demand. For example, an increase in this population would imply a larger home-buying population, the result of which would be more housing starts (a 2.5-percent increase), along with a greater demand for durable goods (a 1.8-percent rise) and residential structures (a 3.0-percent hike).

Even given these increases in demand, however, the 1.0-percent increase in the population older than 16 does not force up interest rates: according to the model, the yield on 10-year U.S. Treasury notes would *decline* by 8.1 percent. This result just reemphasizes the central role played by supply factors in long-term projections.

Exogenous variables unrelated to population tend to have far less influence upon GDP. In general, increases in taxes marginally reduce real GDP through lowered demand. The major exception concerns an increase in the effective social insurance tax rate;[13] the model projects that such a tax increase would sharply lower interest rates. Enough investment spending would thereby result to overcome the reduction in personal consumption expenditures.

In sum, increases in either exogenous Federal expenditures or transfer payments have a relatively minor effect on real GDP. Although increases in both categories would lead to higher disposable income, a countervailing effect on interest rates would occur. On net, the effect on interest rates would prove stronger by reducing the consumption of durable goods and investment in residential structures.

Despite some notable effects, the economic projection appears generally robust to changes in exogenous variables. This is especially the case with regard to employment; in fact, only an increase in the population older than 16 would significantly boost employment.

Sensitivity of selected behavioral variables. As an experiment, certain behavioral variables were increased by either 10 percent or 1 percent over the period 1997–2006. (See table 11 for a list of these variables.) In the case of the GDP price index, the Employment Cost Index, and nonfarm labor productivity, the analysis considered an increase in growth rates. To accomplish this, a multiplicative adjustment was made to the applicable underlying

index for the period 1997 to 2006, so as to increase the 1996–2006 average annual rate of growth by 10 percent.

The analysis shows that higher assumptions about inflation and employment costs are consistent with an economy with lower GDP; a 10-percent increase in the growth rate of either the GDP price index or the Employment Cost Index would yield, respectively, a 0.6-percent and 0.9-percent decrease in GDP. (See table 12.) In part, raising these assumptions results in higher interest rates and, therefore, less demand for durable goods and less investment spending. An additional factor would be the dampening effect of higher input costs on production. Conversely, higher assumptions about the labor force have a positive influence on GDP. (A 0.8-percent increase in GDP results from a 1-percent increase in the labor force.) By adding to the economy's overall capacity to supply goods and services, increasing the labor force does not result in higher interest rates, despite adding to GDP.

The analysis also reveals that consumption spending on durable goods responds more to changes in short-term interest rates, such as the Federal funds rate, while investment spending is more responsive to changes in longer term rates, such as the yield on 10-year Treasury notes. From the standpoint of employment, the projection remains robust to differing assumptions. Mirroring the conclusion reached in the analysis of exogenous variables, changes in the labor force have the most significant effect on employment. □

Table 12. Percent change in projected values for 2006 resulting from a 10-percent increase in selected behavioral variables (except 1 percent where noted)

Variable	Percent changes in projected 2006 levels						
	GDP, chained (1992) dollars	Disposable income, chained (1992) dollars	Employment (household survey)	Unemployment rate	Housing starts	Yield on 10-year U.S. Treasury notes	Exchange rate (index)
Growth rate of GDP price index	–0.6	–0.2	–0.3	3.0	–0.2	4.2	–0.6
Growth rate, Employment Cost Index, wage and salary	–.9	–.2	–.4	4.0	–.7	11.8	–2.3
Growth rate of nonfarm labor productivity	.2	.2	.1	.1	–.5	–1.8	.5
Civilian unemployment rate	–.5	–.3	–.5	10.0	–1.7	4.4	–1.0
Federal funds rate	–.4	–.1	–.1	1.4	–.6	5.1	2.2
Yield on 10-year U.S. Treasury notes	–.7	–.5	–.2	1.8	–.6	10.0	3.8
Exchange rate (trade-weighted index)	.6	.1	.2	–3.0	3.5	–16.7	10.0
Industrial R&D expenditures, in chained (1992) dollars	.3	.2	.0	.0	.6	–2.1	.5
Effective Federal personal income tax rate	.4	–1.5	.2	–2.6	3.6	–20.1	3.2
Price of imported crude oil	–.1	–.2	.0	.0	.4	–1.2	1.0
Labor force (changed 1 percent)	.8	.4	1.0	.5	2.3	-6.9	1.7

Variable	Percent changes in projected 2006 levels								
	Personal consumption expenditures, chained (1992) dollars			Investment expenditures, chained (1992) dollars			International chained (1992) dollars		Government chained (1992) dollars	
				Nonresidential		Residential				
	Durables	Nondurables	Services	Equipment	Structures		Exports	Imports	Federal	State and Local
Growth rate of GDP price index	–.6	–.2	–.3	–.7	–1.1	–1.2	–.4	.0	.0	–.4
Growth rate of Employment Cost Index, wage and salary	–1.2	–.5	–.7	–1.7	–2.1	–2.1	–.7	–.2	–.1	–.7
Growth rate of nonfarm labor productivity	.2	.1	.2	.3	.1	.1	.2	.0	.0	.1
Civilian unemployment rate	–1.2	–.5	–.4	–.4	–.8	–1.5	–.2	–.4	.0	–.4
Federal funds rate	–.6	–.2	–.2	–1.4	–3.3	–1.3	–.6	–.6	.0	–.3
Yield on 10-year U.S.Treasury notes	.3	–.3	–.4	–2.2	–5.6	–1.9	–1.0	–.6	.0	–.4
Exchange rate (trade-weighted index)	2.7	1.0	.9	2.1	3.7	4.7	–2.1	2.5	.1	.7
Industrial R&D expenditures, in chained (1992) dollars	.6	.3	.3	.5	.9	1.3	.1	.3	.0	.2
Effective Federal personal income tax rate	.4	–.2	–.1	1.8	5.0	3.6	.3	.1	.0	.2
Price of imported crude oil	.2	–.1	–.1	.0	.6	.3	–.5	–.4	.0	–.1
Labor force (changed 1 percent)	1.7	.8	.7	.8	1.6	2.6	.2	.7	.0	.5

SOURCE: See table 11.

Footnotes

[1] Real GDP and its components are stated in 1992 chain-weighted dollars. Chain weighting replaces with an averaging technique the past practice of computing real GDP and its components by reference to fixed base-year prices. The averaging technique employs price weights from more than one year. As a result, for a particular year, the chain-weighted components of real GDP generally will not add up to the aggregate chain-weighted real GDP, and there will be a residual. For more details, see "Preview of the Comprehensive Revision of the National Income Accounts: BEA's New Featured Measures of Output and Prices," *Survey of Current Business*, July 1995, pp. 33–38.

[2] Data for 1996 are preliminary.

[3] The National Income and Product Accounts now recognize government expenditures on equipment and structures as investment. Accordingly, government purchases are now divided into consumption expenditures and gross investment. This treats government purchases of fixed assets in a manner more symmetric to the treatment of such assets acquired by private business firms. For more details, see "Preview of the Comprehensive Revision of the National Income Accounts: Recognition of Government Investment and Incorporation of a New Methodology for Calculating Depreciation," *Survey of Current Business*, September 1995, pp. 33–41.

[4] The economic projection was prepared using the Standard and Poor's DRI *U.S. Quarterly Model (US96B), TREND25YR0297 Forecast* (Lexington, MA, February 1997).

[5] The Congress and White House agreed to a budget plan while the BLS projections were being prepared. However, long-term detailed spending and revenue projections embodied in the budget plan were not yet available. Readers should consult this article's sensitivity analysis for indications as to how final spending or tax levels would influence the economic projection.

[6] See Howard N Fullerton, Jr., "Labor force projections to 2006," this issue, pages 23–38.

[7] Since the institutionalized population is neither employed nor seeking employment, the Bureau's labor force projections do not include this portion of the population. Nonetheless, the institutionalized population demands goods and services and so must be considered in the macroeconomic model. In addition, the Armed Forces demand services and so must be included. Accordingly, population figures noted in this article and in Fullerton's will not be directly comparable.

[8] The macroeconomic model employed by the Bureau projects real consumer spending on computers and then derives nominal spending by multiplying the real value by a chain-type price index. A similar procedure applies to most other components of nominal GDP.

[9] Note that, in summing the components of expenditures by State and local government, one construes dividends received as a reduction.

[10] For example, suppose a behavioral variable such as an interest rate is lowered by 10 percent. This would stimulate demand, which in turn would raise the interest rate. So despite the initial change, the interest rate would fall by less than 10 percent. Because the economy is a structure with numerous interrelated components, feedback effects are generally considered important. Accordingly, in the base economic projection, no behavioral variable was excluded from being a part of the model's final solution.

[11] $8{,}539 - 0.002\,(8{,}539) = 8{,}539 - 17.1 \approx 8{,}522.$

[12] $5.4 + 0.008\,(5.4) = 5.4 + 0.0432 \approx 5.44.$

[13] Essentially, the ratio of taxes collected to wage and salary disbursements.

Employment outlook: 1996–2006

Labor force 2006: slowing down and changing composition

As the baby-boom generation ages, the median age of the work force rises to a new record in 2006; the Hispanic labor force could exceed that of blacks

Howard N Fullerton, Jr.

The labor force, those persons working or looking for work, is projected to increase by 15 million over the 1996–2006 period, reaching 149 million in 2006.[1] This 11-percent increase is less than the 14-percent increase over the previous 10-year period, 1986–96, when the labor force grew by 16 million.

For women, the rate of growth in the labor force is expected to slow, but it will still increase at a faster rate than that of men. (See table 1.) As a result, women are projected to increase as a portion of the labor force from 46 percent in 1997 to 47 percent in 2006. The number of men in the labor force is projected to grow, but at a slower rate than that in the past as labor force participation for men in most age groups is projected to continue declining. The projected labor force growth will be affected by the aging of the baby-boom generation, persons born between 1946 and 1964. In 2006, the baby-boom cohort will be ages 42 to 60, and this age group will show significant growth over the 1996–2006 period. Race or Hispanic origin groups have shown—and are projected to continue to show—widely varied growth rates because of divergent rates of population growth in the past. The Asian and other group is projected to increase most rapidly. By 2006, the Hispanic labor force is projected to be larger than the black labor force, primarily because of faster population growth.

The youth labor force (aged 16 to 24) is expected to grow more rapidly than the overall labor force for the first time in 25 years. At the same time, the number of persons in the labor force ages 25 to 44 is projected to decrease, as the baby-boom generation continues its inexorable aging.

This article describes the labor force projections, made by the Bureau of Labor Statistics for 136 age, sex, race, or Hispanic origin groups.[2] For this article, changes in the labor force are first attributed to changes in labor force participation rate or population changes and then to the dynamics resulting from persons entering, leaving, or staying in the labor force; factors that also lead to changes in the composition of the labor force. Finally, this article reviews the demographic implications of projected changes in the age composition of the labor force and population.[3]

The labor force projections are made by combining projections of the population made by the Bureau of the Census with labor force participation rate projections made by the Bureau of Labor Statistics.[4] Consequently, the resulting labor force reflects changes in both projections. Changes in the labor force are better understood if they are decomposed into the two components and, therefore, each of these subjects is discussed separately. To gauge the relative importance of the two components, historically, 81 percent of labor force growth over the 1986–96 period can be attributed to population growth and the remainder, to labor force participation growth. For projected (1996–2006) labor force growth, 89 percent of it can be attributed to population

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Table 1. Civilian labor force by sex, age, race, and Hispanic origin, 1976, 1986, 1996, and projected 2006

[Numbers in thousands]

Group	Level				Change			Percent change			Percent distribution				Annual growth rate (percent)		
	1976	1986	1996	2006	1976–86	1986–96	1996–2006	1976–86	1996–2006	1996–2006	1976	1986	1996	2006	1986–96	1976–86	1996–2006
Total, 16 years and over	96,158	117,834	133,943	148,847	21,676	16,109	14,904	22.5	13.7	11.1	100.0	100.0	100.0	100.0	2.1	1.3	1.1
Men, 16 years and over	57,174	65,422	72,087	78,226	8,248	6,665	6,139	14.4	10.2	8.5	59.5	55.5	53.8	52.6	1.4	1.0	.8
Women, 16 years and over	38,983	52,413	61,857	70,620	13,430	9,444	8,764	34.5	18.0	14.2	40.5	44.5	46.2	47.4	3.0	1.7	1.3
16 to 24	23,340	23,367	21,183	24,418	27	–2,184	3,236	.1	–9.3	15.3	24.3	19.8	15.8	16.4	.0	–1.0	1.4
25 to 54	58,502	79,563	96,786	101,454	21,061	17,223	4,668	36.0	21.6	4.8	60.8	67.5	72.3	68.2	3.1	2.0	.5
55 and over	14,317	14,904	15,974	22,974	587	1,070	6,999	4.1	7.2	43.8	14.9	12.6	11.9	15.4	.4	.7	3.7
White, 16 years and over	84,767	101,801	113,108	123,581	17,034	11,307	10,473	20.1	11.1	9.3	88.2	86.4	84.4	83.0	1.8	1.1	.9
Black, 16 years and over	9,561	12,654	15,134	17,225	3,093	2,480	2,091	32.4	19.6	13.8	9.9	10.7	11.3	11.6	2.8	1.8	1.3
Asian and other, 16 years and over [1]	1,822	3,371	5,703	8,041	1,549	2,332	2,338	85.0	69.2	41.0	1.9	2.9	4.3	5.4	6.3	5.4	3.5
Hispanic origin, 16 years and over [2]	...	8,076	12,774	17,401	...	4,698	4,627	...	58.2	36.2	...	6.9	9.5	11.7	...	4.7	3.1
Other than Hispanic origin, 16 years and over [2]	...	109,758	121,169	131,446	...	11,411	10,276	...	10.4	8.5	...	93.1	90.5	88.3	...	1.0	.8
White non-Hispanic [2]	...	94,026	100,915	108,166	...	6,890	7,251	...	7.3	7.2	...	79.8	75.3	72.7	...	.7	.7

[1] The "Asian and other" group includes (1) Asians and Pacific Islanders and (2) American Indians and Alaska Natives. The historical data are derived by subtracting "black" from the "black and other" group; projections are made directly, not by subtraction.

[2] Data by Hispanic origin are not available before 1980.

growth and 11 percent, to an increase in labor force participation rates.

Population

Population will continue to increase over the 1996–2006 period, but the rate of growth will be slower than that during the previous 10 years, continuing the slowing trend since the mid-1970s. (This analysis is based on the Census Bureau's middle population projection scenario.) Minority groups that have grown the fastest in the past, Asians and other and Hispanics, are projected to continue to grow much faster than white non-Hispanics. Youth, ages 16 to 24, will increase as a share of the population, reversing a declining trend since the mid-1970s. The age group 55 to 64 will increase by 9 million persons over the 1996–2006 period, reversing a decline that occurred over the 1986–96 period. The 65 and older group will decline as a share of the population, reversing the trend, of the 1976–86 and 1986–96 periods.

Population growth trends and changes in its demographic composition reflect births, deaths, and net migration to and from the United States. Table 2 provides four snapshots of the population at 10-year intervals over the 1976–2006 period. Four major demographic events over this period have had a significant impact on shaping the changes in growth rates of the population and its composition by age, sex, race, and Hispanic origin: 1) the birth dearth of the late 1920s and early 1930s, 2) the baby boom of the late 1940s through the early 1960s, 3) the modest increase in births from the late 1970s through the early 1990s, and 4) the massive immigra-

Table 2. Civilian noninstitutional population by sex, age, race, and Hispanic origin, 1976, 1986, 1996, and projected 2006

[Numbers in thousands]

Group	Level				Change			Annual growth rate			Percent distribution			
	1976	1986	1996	2006	1976–86	1986–96	1996–2006	1976–86	1986–96	1996–2006	1976	1986	1996	2006
Total, 16 years and over	156,150	180,587	200,591	221,191	24,437	20,004	20,600	1.5	1.1	1.0	100.0	100.0	100.0	100.0
16 to 24	35,723	34,066	32,343	38,106	–1,657	–1,723	5,764	–.5	–.5	1.7	22.9	18.9	16.1	17.2
16 to 19	16,614	14,496	14,934	17,245	–2,118	438	2,311	–1.4	.3	1.4	10.6	8.0	7.4	7.8
20 to 24	19,109	19,569	17,409	20,862	460	–2,160	3,453	.2	–1.2	1.8	12.2	10.8	8.7	9.4
25 to 54	78,158	97,013	115,506	119,500	18,855	18,493	3,995	2.2	1.8	.3	50.1	53.7	57.6	54.0
25 to 34	31,953	41,731	40,252	36,370	9,778	–1,479	–3,882	2.7	–.4	–1.0	20.5	23.1	20.1	16.4
35 to 44	22,796	32,550	43,086	41,550	9,754	10,536	–1,536	3.6	2.8	–.4	14.6	18.0	21.5	18.8
45 to 54	23,409	22,732	32,167	41,580	–677	9,435	9,413	–.3	3.5	2.6	15.0	12.6	16.0	18.8
55 and over	42,269	49,508	52,742	63,584	7,239	3,234	10,843	1.6	.6	1.9	27.1	27.4	26.3	28.7
55 to 64	20,185	22,011	20,990	29,956	1,826	–1,021	8,966	.9	–.5	3.6	12.9	12.2	10.5	13.5
65 and over	22,083	27,497	31,751	33,628	5,414	4,254	1,877	2.2	1.4	.6	14.1	15.2	15.8	15.2
65 to 74	13,977	17,039	18,244	18,140	3,062	1,205	–104	2.0	.7	–.1	9.0	9.4	9.1	8.2
75 and over	8,160	10,525	13,507	15,488	2,365	2,982	1,981	2.6	2.5	1.4	5.2	5.8	6.7	7.0
Men, 16 years and over	73,759	85,798	96,206	106,267	12,039	10,408	10,061	1.5	1.2	1.0	47.2	47.5	48.0	48.0
16 to 24	17,481	16,773	16,210	19,518	–708	–563	3,308	–.4	–.3	1.9	11.2	9.3	8.1	8.8
16 to 19	8,244	7,275	7,600	8,675	–969	325	1,075	–1.2	.4	1.3	5.3	4.0	3.8	3.9
20 to 24	9,237	9,498	8,611	10,844	261	–887	2,233	.3	–1.0	2.3	5.9	5.3	4.3	4.9
25 to 54	37,781	47,342	56,671	58,290	38,105	9,329	1,619	2.3	1.8	.3	24.2	26.2	28.3	26.4
25 to 34	15,528	20,498	19,775	17,839	–17,283	–723	–1,936	2.8	–.4	–1.0	9.9	11.4	9.9	8.1
35 to 44	11,010	15,858	21,222	20,392	330	5,364	-829	3.7	3.0	–.4	7.1	8.8	10.6	9.2
45 to 54	11,243	10,986	15,674	20,058	–24	4,688	4,384	–.2	3.6	2.5	7.2	6.1	7.8	9.1
55 and over	18,497	21,683	23,324	28,459	10,440	1,641	5,135	1.6	.7	2.0	11.8	12.0	11.6	12.9
55 to 64	9,444	10,336	9,997	14,131	–8,161	–339	4,134	.9	–.3	3.5	6.0	5.7	5.0	6.4
65 and over	9,053	11,347	13,327	14,328	1,903	1,980	1,001	2.3	1.6	.7	5.8	6.3	6.6	6.5
65 to 74	6,028	7,557	8,194	8,361	–1,496	637	167	2.3	.8	.2	3.9	4.2	4.1	3.8
75 and over	3,034	3,857	5,134	5,967	–2,171	1,277	833	2.4	2.9	1.5	1.9	2.1	2.6	2.7
Women, 16 years and over	82,390	94,789	104,385	114,924	12,399	9,596	10,539	1.4	1.0	1.0	52.8	52.5	52.0	52.0
16 to 24	18,242	17,293	16,132	18,588	–949	–1,161	2,456	–.5	–.7	1.4	11.7	9.6	8.0	8.4
16 to 19	8,370	7,221	7,335	8,570	–1,149	114	1,235	–1.5	.2	1.6	5.4	4.0	3.7	3.9
20 to 24	9,872	10,072	8,798	10,018	200	–1,274	1,220	.2	–1.3	1.3	6.3	5.6	4.4	4.5
25 to 54	40,377	49,671	58,835	61,210	9,294	9,164	2,376	2.1	1.7	.4	25.9	27.5	29.3	27.7
25 to 34	16,425	21,233	20,477	18,531	4,808	–756	–1,946	2.6	–.4	–1.0	10.5	11.8	10.2	8.4
35 to 44	11,786	16,692	21,865	21,158	4,906	5,173	–706	3.5	2.7	–.3	7.5	9.2	10.9	9.6
45 to 54	12,166	11,746	16,493	21,521	–420	4,747	5,028	–.4	3.5	2.7	7.8	6.5	8.2	9.7
55 and over	23,771	27,825	29,417	35,125	4,054	1,592	5,708	1.6	.6	1.8	15.2	15.4	14.7	15.9
55 to 64	10,742	11,675	10,993	15,825	933	–682	4,832	.8	–.6	3.7	6.9	6.5	5.5	7.2
65 and over	13,030	16,150	18,424	19,301	3,120	2,274	876	2.2	1.3	.5	8.3	8.9	9.2	8.7
65 to 74	7,949	9,482	10,050	9,780	1,533	568	–271	1.8	.6	–.3	5.1	5.3	5.0	4.4
75 and over	5,126	6,668	8,374	9,521	1,542	1,706	1,147	2.7	2.3	1.3	3.3	3.7	4.2	4.3
White, 16 years and over	137,106	155,432	168,317	182,147	18,326	12,885	13,830	1.3	.8	.8	87.8	86.1	83.9	82.3
Men	65,132	74,390	81,489	88,893	9,258	7,099	7,404	1.3	.9	9	41.7	41.2	40.6	40.2
Women	71,974	81,042	86,828	93,255	9,068	5,786	6,427	1.2	.7	.7	46.1	44.9	43.3	42.2
Black, 16 years and over	16,196	19,989	23,604	26,548	3,793	3,615	2,944	2.1	1.7	1.2	10.4	11.1	11.8	12.0
Men	7,265	8,956	10,575	11,483	1,691	1,619	909	2.1	1.7	.8	4.7	5.0	5.3	5.2
Women	8,931	11,033	13,029	15,064	2,102	1,996	2,036	2.1	1.7	1.5	5.7	6.1	6.5	6.8
Asian and other, 16 years and over [1]	2,867	5,147	8,671	12,496	2,280	3,524	3,824	6.0	5.4	3.7	1.8	2.9	4.3	5.6
Men	1,354	2,434	4,142	5,891	1,080	1,708	1,749	6.0	5.5	3.6	.9	1.3	2.1	2.7
Women	1,513	2,713	4,530	6,605	1,200	1,817	2,075	6.0	5.3	3.8	1.0	1.5	2.3	3.0

Table 2. Continued—Civilian noninstitutional population by sex, age, race, and Hispanic origin, 1976, 1986, 1996, and projected 2006

[Numbers in thousands]

Group	Level				Change			Annual growth rate			Percent distribution			
	1976	1986	1996	2006	1976–86	1986–96	1996–2006	1976–86	1986–96	1996–2006	1976	1986	1996	2006
Hispanic origin, 16 years and over [2]	...	12,344	19,213	26,459	...	6,869	7,247	...	4.5	3.3	...	6.8	9.6	12.0
Men	...	6,105	9,604	13,270	...	3,499	3,667	...	4.6	3.3	...	3.4	4.8	6.0
Women	...	6,238	9,610	13,189	...	3,372	3,579	...	4.4	3.2	...	3.5	4.8	6.0
Other than Hispanic origin, 16 years and over [2]	...	168,243	181,378	194,732	...	13,135	13,354	...	.8	.7	...	93.2	90.4	88.0
Men	...	79,693	86,602	92,997	...	6,909	6,395	...	.8	.7	...	44.1	43.2	42.0
Women	...	88,551	94,775	101,735	...	6,224	6,960	...	.7	.7	...	49.0	47.2	46.0
White non-Hispanic, 16 and over [2]	...	143,566	150,026	158,638	...	6,460	8,612	...	.4	.6	...	79.5	74.8	71.7
Men	...	68,587	72,318	77,013	...	3,731	4,695	...	.5	.6	...	38.0	36.1	34.8
Women	...	74,980	77,708	81,625	...	2,729	3,917	...	.4	.5	...	41.5	38.7	36.9

[1] The "Asian and other" group includes (1) Asians and Pacific Islanders and (2) American Indians and Alaska Natives. The historical data are derived by subtracting "black" from the "black and other" group; projections are made directly, not by subtraction.

[2] Data by Hispanic origin are not available before 1980.

tion that started in the 1970s and has yet to cease.

The effects of the first event are reflected in the declining number of persons aged 45 to 54 from 1976–86, aged 55 to 64 from 1986–96, and aged 65 to 74, 1996–2006. The second event can be traced by following the movements of the baby-boom generation through age groups with the greatest increase in each period. For example, the 25- to 44-age group increased most significantly over the 1976–86 period and the 35- to 54-age group had the greatest increase over the 1986–96 period. For the projected period, 1996–2006, persons aged 45 to 64 are expected to generate the highest growth. The population in the age group following the baby-boomers shows declining numbers, those aged 25 to 34 from 1986 to 1996 and 25 to 44 in the projection, 1996–2006. From 1996 to 2005, the number of persons aged 25 to 34 is expected to decline by 3.9 million. This same age group increased by 9.8 million during 1976–86, when the baby boomers were that age.

The third demographic event will be reflected in growth of the population aged 16 to 24 from 1996 to 2006, which will reverse the trend of declining numbers in this age group over the 1976–86 and 1986–96 periods.

For the fourth event, net immigration has had a significant impact on population growth over the 1976–96 period and is expected to continue to do so over the 1996–2006 period. The assumption used by the Bureau of the Census for the middle population growth scenario used in developing the labor force projections is that net immigration will be 820,000 each year. Thus, a sizable proportion of the net population growth over the projected 1996–2006 period will stem from immigration. The effects of immigration on the demographic composition of the population can be seen in two ways in table 2. The first is reflected in the very rapidly paced growth of the Asian and other and Hispanic populations. Although growth of these groups is expected to slow from 1996–2006, the projected growth rates for these groups are nevertheless much faster than for other groups. The second way immigration affects the composition of the population is by age distribution. For example, persons aged 25 to 34 numbered 32 million in 1976. Ten years later, this same cohort was even larger, 32.6 million. Similarly, persons aged 25 to 34 in 1986 grew in number from 41.7 million to 43.1 million 10 years later. The only way these cohorts could increase is through net immigration. Because the overwhelming reason for immigration is the opportunity to work, the labor force at these ages is affected significantly by immigration.[5]

The general effect of mortality on the population can be seen by the age distributions of women and men. However, the longevity of women as compared to men is also seen clearly in table 2. In 1996, men and women were each 8 percent of the population aged 16 to 24. However, for persons 75 years of age and older, women made up 4 percent of the population and men, 2.6 percent, reflecting the higher life expectancy of women.

To summarize the projected population component, the middle growth population is expected to be larger, to have a lower proportion of non-Hispanic whites (72 percent, down from 75 percent in 1996), more youth and more older people. The baby-boom generation would be 10 years older. The proportion of men and women in the population would not change.

An alternative immigration scenario. Of the various ways the future population could be different, the possibility of higher immigration is of great interest. BLS prepared an alternative labor force projection reflecting the high net immigration scenario from the Census Bureau; the only difference in the population is the assumption about net immigration, which is 1.4 million persons annually. This reflects more people entering the United States and fewer leaving it than those in the middle growth scenario. A summary, provided in table 3, shows how the labor force projection would differ from the base projection (or middle growth scenario) if this alternative were used. The labor force would be, of course, larger, by 5.8 million or 4 percent. This is a greater increase than the population increase, which is 4.4 million or 2 percent. Because the overwhelming number of persons who come to the United States do so to work, the Bureau increased the labor force participation rates for this scenario. The labor force of women would increase somewhat more than that for men. The increase would be concentrated in the ages younger than 55, which are the ages of greatest immigration. The proportion of the labor force under age 25 would increase, the proportion aged 25 to 54 would remain the same, and the older labor force's share would decrease.

Because immigration to the United States varies significantly by country and area of the world, so does immigration by race and Hispanic origin. Under the high immigration scenario, the number of Asians and others would increase by 13 percent and the number of Hispanics by 8 percent. The number of blacks in the labor force would also increase by more than the overall rate of increase in the labor force and the increase of white non-Hispanics would be less than the overall increase. As a result, their share of the labor force would be 1 percentage point less. The black share of the labor force would not change and the other two groups would increase their share.

Labor force participation rates

The labor force participation or activity rate—a measure of the proportion of a population group in the labor force—differs by age, sex, race and Hispanic origin as shown in table 4. Although labor force participation rates for specific groups change over time, the general overall pattern is fairly consistent across age groups, between the sexes, and among race and Hispanic origin groups.

Age. Labor force participation is low for young persons (aged 16 to 24) because of school or child care responsibilities. It rises during the working years, ages 25 to 44, and then declines after age 55 as workers retire. The participation rate for persons aged 16 to 19 in 1996 was 52 percent; for ages 35 to 44, the rate was 85 percent; and for ages 75 and older, the rate dropped to 5 percent in 1996.

Sex. The labor force participation rates for men are not only higher than those for women at the aggregated level, but also at every age group. The trends in the rates for men and women are also different. In general, the rates for women have been rising, while the rates for men have been declining, although some age groups go against the general pattern. The difference in rates by sex also holds across race and Hispanic origin groups, as a later section shows.

Table 3. High immigration projection of the civilian labor force by sex, age, race, and Hispanic origin, 2006

Group	Participation rate (percent)	Difference from base projection	Labor force (thousands)	Difference from base projection (thousands)	Percent difference	Percent distribution	Difference from base projection	Population (thousands)	Difference from base projection (thousands)
Total	68.6	1.0	154,650	5,803	3.9	100.0	...	225,591	4,400
Men	74.7	1.1	81,169	2,943	3.8	52.5	–.1	108,703	2,436
Women	62.9	1.4	73,481	2,860	4.1	47.5	.1	116,888	1,964
16 to 24	66.6	4.2	25,763	1,344	5.5	16.7	.3	38,670	564
25 to 54	85.9	.4	105,386	3,932	3.9	68.1	.0	122,666	3,166
55 years and over	36.6	–.2	23,501	527	2.3	15.2	–.2	64,254	670
White, 16 years and over	69.3	1.2	127,527	3,946	3.2	82.5	–.6	184,153	2,006
Black, 16 years and over	65.2	.3	18,061	836	4.9	11.7	.1	27,696	1,148
Asian and other, 16 years and over[1]	65.9	.3	9,062	1,021	12.7	5.9	.5	13,741	1,246
Hispanic, 16 years and over	68.0	.6	18,852	1,452	8.3	12.2	.5	27,721	1,262
Other than Hispanic, 16 years and over	68.6	1.1	135,797	4,352	3.3	87.8	–.5	197,870	3,138
White non-Hispanic	69.4	.6	110,837	2,670	2.5	71.7	–1.0	159,765	1,127

[1] The "Asian and other" group includes (1) Asians and Pacific Islanders and (2) American Indians and Alaska Natives.

Table 4. Civilian labor force participation rates by sex, age, race, and Hispanic origin, 1976, 1986, 1996, and projected 2006

Group	Participation rate (percent)				Percentage point change (percent)		
	1976	1986	1996	2006	1976–86	1986–96	1996–2006
Total, 16 years and over	61.6	65.3	66.8	67.6	3.7	1.5	.8
16 to 24	65.3	68.6	65.5	62.4	3.3	–3.1	–3.1
16 to 19	54.5	54.7	52.3	51.8	.2	–2.4	–.5
20 to 24	74.8	78.9	76.8	74.3	4.2	–2.1	–2.6
25 to 54	74.9	82.0	83.8	85.5	7.2	1.8	1.7
25 to 34	75.7	82.9	84.1	84.8	7.1	1.2	.7
35 to 44	75.7	83.7	84.8	85.3	7.9	1.2	.5
45 to 54	76.0	78.0	82.1	84.6	2.1	4.0	2.5
55 and over	33.9	30.1	30.3	36.8	–3.8	.2	6.5
55 to 64	56.6	54.0	57.9	62.6	–2.5	3.8	4.7
65 and over	13.1	10.9	12.1	12.6	–2.2	1.1	.5
65 to 74	17.7	15.2	17.5	18.2	–2.5	2.3	.7
75 and over	5.2	4.0	4.7	5.9	–1.2	.7	1.2
Men, 16 years and over	77.5	76.3	74.9	73.6	–1.3	–1.3	–1.3
16 to 24	72.9	73.0	68.8	65.8	.1	–4.3	–2.9
16 to 19	59.3	56.4	53.2	52.5	–2.9	–3.2	–.7
20 to 24	85.2	85.8	82.5	76.5	.6	–3.3	–6.0
25 to 54	94.2	93.8	91.8	90.8	–.4	–2.0	–1.0
25 to 34	95.2	94.6	93.2	92.3	–.6	–1.4	–.9
35 to 44	95.4	94.8	92.4	90.6	–.6	–2.4	–1.8
45 to 54	91.6	91.0	89.1	89.5	–.6	–1.9	.4
55 and over	47.8	40.4	38.3	43.8	–7.4	–2.1	5.5
55 to 64	74.3	67.3	67.0	70.2	–7.1	–.3	3.2
65 and over	20.2	16.0	16.9	17.8	–4.2	.9	.9
65 to 74	25.6	20.5	22.9	23.9	–5.1	2.3	1.1
75 and over	9.3	6.7	7.3	9.2	–2.6	.6	1.9
Women, 16 years and over	50.9	55.3	59.3	61.4	4.4	4.0	2.2
16 to 24	62.5	64.3	62.2	62.2	1.8	–2.1	.0
16 to 19	54.2	53.0	51.3	51.0	–1.3	–1.7	–.3
20 to 24	69.0	72.4	71.3	71.8	3.4	–1.1	.5
25 to 54	62.3	70.8	76.1	79.3	8.5	5.3	3.2
25 to 34	63.9	71.6	75.2	77.6	7.7	3.6	2.3
35 to 44	63.6	73.1	77.5	80.2	9.5	4.4	2.7
45 to 54	58.3	65.9	75.4	79.9	7.6	9.4	4.5
55 and over	23.2	22.1	23.9	29.9	–1.2	1.8	6.0
55 to 64	41.7	42.3	49.6	55.8	.6	7.3	6.2
65 and over	8.3	7.4	8.6	8.7	–.9	1.2	.1
65 to 74	11.8	11.0	13.1	13.3	–.8	2.2	.2
75 and over	2.7	2.4	3.1	3.9	–.4	.7	.8
White	61.8	65.5	67.2	68.1	3.7	1.7	.9
Men	78.4	76.9	75.8	74.3	–1.4	–1.1	–1.6
Women	46.9	55.0	59.1	62.0	8.1	4.1	2.9
Black, 16 years and over	59.0	63.3	64.1	64.9	4.3	.8	.8
Men	70.2	71.2	68.7	69.6	.9	–2.5	.9
Women	49.9	56.9	60.4	61.3	7.0	3.5	.9
Asian and other, 16 years and over[1]	64.6	65.5	65.8	65.7	.9	.3	–.1
Men	79.2	75.0	73.4	71.6	–4.2	–1.6	–1.7
Women	51.9	57.0	58.8	60.1	5.1	1.8	1.3
Hispanic origin, 16 years and over[2]	...	65.4	66.5	65.7	...	1.1	1.0
Men	...	81.0	79.6	77.1	...	–1.4	–2.5
Women	...	50.1	53.4	57.2	...	3.2	3.8
Other than Hispanic origin, 16 years and over[2]	...	65.2	66.8	67.5	...	1.6	.7
Men	...	75.9	74.4	73.1	...	–1.5	–1.3
Women	...	55.7	59.9	62.4	...	4.2	2.5
White non-Hispanic, 16 years and over[2]	...	65.5	67.3	68.7	...	1.8	1.5
Men	...	76.5	75.3	74.1	...	–1.2	–1.2
Women	...	55.4	59.8	63.7	...	4.4	3.9

[1] The "Asian and other" group includes (1) Asians and Pacific Islanders and (2) American Indians and Alaska Natives. The historical data are derived by subtracting "black" from the "black and other" group; projections are made directly, not by subtraction.

[2] Data by Hispanic origin are not available before 1980.

Age and sex. Changes over time in the aggregate labor force participation rates of men have been consistent: down by 1.3 percentage points for both 1976–86 and 1986–96. The age-specific activity rates of men have been dropping across age groups with few exceptions. Over the 1976–86 period, only men aged 20 to 24 increased their participation, and only by a modest 0.6-percentage points. This was not repeated in the 1986–96 period. Labor force participation rates for men 65 and older increased, starting in 1985. The rates for men 65 to 74 increased sharply, by 2.3 percentage points, reversing a trend that dates back to at least 1890.

All other age groups of men decreased their labor force participation in both periods. For age groups under 55, the drop in participation was greater in the 1986–96 period than that in the 1976–86 period. There has been little research on the long-term decrease in participation rates of men aged 25 to 54, a group that our society views as strongly attached to the labor force.

Unlike men, the labor force participation rates of women have been increasing across age groups, with a few exceptions for young and older women in one of the two periods. For example, the labor force participation rates of women ages 20 to 24 increased 3.4 percentage points between 1976 and 1986, before falling by 1.1 points between 1986 and 1996. Also, the labor force participation rates of women 65 and older decreased in the 1976–86 period, but increased in the later period, more than offsetting the decrease. Women aged 25 to 34 increased their participation rates sharply during the earlier period, by 7.7 points, however, the increase in the 1986–96 period was less than half that increase. The group of women who increased their participation the most during the 1976–86 period were aged 35 to 44; their participation increased almost 10 percentage points. Interestingly, the same group of women displayed the greatest increase in participation in the 1986–96 period, when they were aged 45 to 54. Women aged 35 to 54 in 1976 have also increased their labor force participation rates markedly over the past two decades.

Race and Hispanic origin. Differences in labor force participation by race and Hispanic origin are usually not as great as that observed for age and sex. However, changes in labor force rates over time differ among the groups. When participation rate changes are combined with different patterns of population growth, substantial differences in the future labor force result.

The data shown in the lower part of table 4 indicate the variation in labor force participation by race. However, the pattern is complex, as shown in the following tabulation. The groups are ranked in terms of their labor force participation rates (1 is highest labor force participation; 4 is lowest):

Total	*Men*	*Women*	*Rank*
White non-Hispanic	Hispanic	Black	1
Hispanic	White non-Hispanic	White non-Hispanic	2
Asian and other	Asian and other	Asian and other	3
Black	Black	Hispanic	4

First, the rankings by race and by sex are different. Hispanic men have the highest labor force participation rates, Hispanic women, the lowest. The composite effect is that Hispanics have the second highest rate of labor force participation. For blacks, the situation by gender is reversed as men have the lowest participation rate and women, the highest. Blacks have the lowest overall rate of labor force participation.

Table 5. Comparison of the labor force participation rates and the age composition of Hispanic and white non-Hispanic men, 1996

[In percent]

Age	Labor force participation rate			Population composition by age		
	Hispanic	White, non-Hispanic	Difference	Hispanic	White, non-Hispanic	Difference
16 and 17	32.2	48.1	15.9	5.0	3.6	–1.4
18 and 19	67.1	69.1	2.0	5.3	3.4	–1.9
20 and 21	82.0	78.6	–3.5	5.3	2.9	–2.4
22 to 24	88.0	88.3	.3	8.4	5.0	–3.4
25 to 29	93.2	94.1	.9	13.6	8.7	–4.8
30 to 34	93.2	94.9	1.7	14.5	10.4	–4.1
35 to 39	92.6	94.0	1.4	12.6	11.4	–1.2
40 to 44	90.5	93.6	3.2	9.7	10.4	.7
45 to 49	88.0	92.7	4.7	6.6	9.6	3.0
50 to 54	85.7	88.1	2.4	4.9	7.6	2.7
55 to 59	78.4	80.4	2.0	4.1	5.8	1.7
60 and 61	61.5	67.2	5.7	1.3	2.1	.8
62 to 64	43.8	47.1	3.3	2.0	3.2	1.2
65 to 69	27.5	27.7	.2	2.8	5.3	2.5
70 to 74	11.3	16.4	5.0	1.7	4.5	2.8
75 and over	6.4	8.6	2.1	2.0	5.9	3.9

Table 6. Comparison of the labor force participation rates and the age composition of black and white non-Hispanic women, 1996

[percent]

Age	Labor force participation rate			Population composition by age		
	Black	White, non-Hispanic	Difference	Black	White, non-Hispanic	Difference
16 and 17	29.9	50.0	20.1	4.7	3.2	–1.5
18 and 19	48.3	66.3	17.9	4.5	3.1	–1.4
20 and 21	58.3	71.6	13.3	4.2	2.8	–1.4
22 to 24	69.9	78.7	8.9	6.3	4.7	–1.6
25 to 29	74.8	78.8	3.9	10.9	8.3	–2.6
30 to 34	76.8	77.0	.2	11.6	9.8	–1.8
35 to 39	78.7	77.9	–.8	11.7	10.7	–1.0
40 to 44	77.7	80.3	2.6	10.4	9.8	–.5
45 to 49	75.2	80.4	5.3	8.5	9.2	.7
50 to 54	67.4	73.2	5.8	5.9	7.3	1.4
55 to 59	58.4	62.0	3.6	4.9	5.7	.8
60 and 61	40.8	47.7	6.8	1.9	2.1	.2
62 to 64	28.8	33.6	4.7	2.4	3.2	.9
65 to 69	13.7	17.8	4.1	3.9	5.7	1.9
70 to 74	7.7	8.6	.9	3.1	5.3	2.2
75 and over	3.2	3.3	.0	5.2	9.0	3.9

The high labor force participation rate for Hispanic males, in part, reflects their age structure. Hispanics have a younger population with a greater proportion at the ages of higher labor force participation. As table 5 shows, the rates for white non-Hispanic white men are higher for all age groups except at ages 20 and 21. The table also shows that Hispanic men have proportionally more young men. Given that Hispanic women are also younger than the other groups, their lower overall labor force participation rate reflects lower participation at most age groups.

The high labor force participation rates for black women also reflect their age structure. Relative to white non-Hispanic women, the group of women with the second highest labor force participation (table 6), black women have lower participation rates at every age. However, they have a younger population. That is, more of their population is concentrated in age groups with high participation.

These examples indicate that age, sex, and race are important in describing the variations in labor force participation. However, the previous discussion focused on 1996. Overall labor force participation has been changing differently for these groups as well. The following tabulation ranks the groups by the percentage point change over the 1986–96 period:

Total	*Men*	*Women*	*Rank*
White non-Hispanic	White non-Hispanic	White non-Hispanic	1
Hispanic	Hispanic	Black	2
Black	Asian and other	Hispanic	3
Asian and other	Black	Asian and other	4

For the totals by group, the relative rankings of blacks and of Asians and others shifted. The labor force participation of all four groups of men dropped, but those for white non-Hispanic men dropped the least. Other than this change of place with Hispanic men, the rankings for men did not change. The rankings of women's change in participation did not seem to be as related to their rankings of participation levels. The labor force participation of white non-Hispanic women grew more than that for black women. Hispanic women, who have lower overall participation than Asian and other women, had a greater increase in participation.

Projected rate changes

The labor force participation rate is projected to rise by less than a percentage point between 1996 and 2006. The increases in the participation rates are expected to be greatest for the 45- to 54-age group, made up of the baby-boom generation. As in 1996, however, the ages of peak labor force participation should be 35 to 44. Thus, the baby-boom generation's aging by itself would act to lower overall participation. For both sexes combined, labor force rates are projected to increase for all groups over age 25. For the youth, labor force participation is expected to drop sharply at ages 20 to 24.

The overall labor force participation rate of men is projected to drop by 1.3 percentage points, as it did in each of the past two decades. This constant change is fortuitous because the overall rate is a summary of the changes in the age composition of the population and changes in labor force participation for each age as well as the increased race and Hispanic diversity of the male population. For each of the three 10-year

periods analyzed, the pattern of labor force change by age is different. For men younger than age 45, labor force participation is projected to drop, while for men in the 45 and older group, those aged 55 to 64, are projected to have the greatest increase.[6] The decrease in labor force participation for men aged 20 to 24 is projected to accelerate, continuing recent trends. For all other groups with declining participation over the 1986–96 period, the amount of decrease is expected to be less.

The increase in the labor force participation rate of women in the past has displayed a pattern of slower increases in the more recent period. For the 1996–2006 period, labor force participation rate growth is projected to continue slowing. Except for teenagers, all age groups of women are expected to increase their presence in the labor force. Those aged 45 to 64 in 2006 are the same cohort that had the greatest increase in labor force participation in the past—25 to 44 in 1976–86 and 35 to 54 in 1986–96—are expected again to have the greatest increase in the future. The older part of the group, those 55 to 64 in 2006, will be past the years of peak labor force participation and their labor force rate will decline to 56 percent from 75 percent in 1996 (although showing an increase in participation of 6 points from persons that age in 1996).

The rankings of labor force participation by race or Hispanic groups in 2006 are expected to be the same as in 1996, except for black women, whose participation rates are projected to be lower than white non-Hispanic women's rates—a result of the aging black population. The overall labor force participation rate of black men is projected to increase, also an artifact of their age distribution. For all age groups of blacks except 70 to 74, labor force participation rates are projected to drop.

The overall participation of Hispanic women is projected to increase significantly, by 3.8 percentage points, but not enough to be higher than that of the Asian and other women in 2006. Again, white non-Hispanic women are expected to increase their labor force participation rates the most, though not as much as over the 1986–96 period.

Historical changes in the labor force

Labor force growth over the 1986–96 period was significantly slower than the rate of growth over the 1976–86 period, when larger numbers of the baby boomers caused rapid rates of labor force growth and large absolute growth. The labor force grew by 22 million between 1976 and 1986, compared with 16 million over the 1986–96 period (table 7). The male labor force, because of the entry of the baby-boom generation, grew by 14 percent over the earlier period. This rate dropped to 10 percent between 1986 and 1996. Women increased their numbers by almost one-third over the 10-year period 1976–86. This growth rate was cut in half over the latter period.

Age. Labor force changes by age over the 1976–96 period were largely influenced by the baby-boomers and the birth dearth group of the thirties. Between 1976 and 1986, the baby boomers were in the age groups that grew rapidly. Those aged 25 to 34 increased by 10 million and those 35 to 44, by 9.9 million. For the next decade, the two groups with the greatest change were aged 35 to 44 and 45 to 54, with 9.3 million and 8.6 million added workers. Growth of the labor force by the baby boomers was affected not just by population growth, but by growth in the labor force participation rate for women.

By contrast, the age group 45 to 54 barely grew during the 1976–86 period; over the next 10 years, the 55 to 64 group added few members. The modest changes reflect the passage of the birth dearth generation. The labor force participation rates of this cohort increased, offsetting population decreases.

Sex. Labor force growth for men was less than that for women in both the 1976–86 and 1986–1996 periods whether measured by numbers of persons or rates of change. Although population growth for both sexes was similar, labor force participation rates for men declined, and increased for women.

In contrast to the general pattern, labor force participation rates of young women, 16 to 24 years of age dropped over the 1986–96 period. Because the population of women that age also dropped, the labor force dropped sharply. The labor force of young women dropped slightly more than that for young men (10 percent, versus 9 percent). For all other groups of women, activity rates increased and, except for the birth dearth group, so did population.

Race and Hispanic origin. White non-Hispanics were the largest group in the labor force in 1986, accounting for 80 percent of the total. However, from 1986 to 1996, this group had the lowest growth rate, 0.7 percent a year, among the groups analyzed. The smallest group, Asians and others had the fastest growth rate. Interestingly, growth rates were inversely related to ranking by size, and the rankings were the same for men and women. Asian and other women and men each were the fastest growing labor force group over the 1986–96 period. All minority groups increased their share of the labor force. Hispanics increased from 7 percent to 9.5 percent, Asian and others increased their share from 3 percent to 4.3 percent. Blacks, whose growth rate was .5 percentage point greater than the overall labor force growth rate, increased their share from 10.7 percent to 11.3 percent. The remaining group, white non-Hispanic, decreased their share of the labor force from 80 percent to 75 percent. The pattern of labor force growth rates is more reflective of changes in the population than the changes in labor force participation rates, which grew most rapidly for white non-Hispanics than other groups.

Table 7. Civilian labor force by sex, age, race, and Hispanic origin, 1976, 1986, 1996, and projected 2006

[Numbers in thousands]

Group	Level				Change			Percent change			Percent distribution				Annual growth rate (percent)		
	1976	1986	1996	2006	1976–86	1986–96	1996–2006	1976–86	1986–96	1996–2006	1976	1986	1996	2006	1976–86	1986–96	1996–2006
Total, 16 years and over	96,158	117,834	133,943	148,847	21,676	16,109	14,904	22.5	13.7	11.1	100.0	100.0	100.0	100.0	2.1	1.3	1.1
16 to 24	23,340	23,367	21,183	24,418	27	–2,184	3,236	.1	–9.3	15.3	24.3	19.8	15.8	16.4	.0	–1.0	1.4
16 to 19	9,056	7,926	7,806	8,924	–1,130	–120	1,118	–12.5	–1.5	14.3	9.4	6.7	5.8	6.0	–1.3	–.2	1.3
20 to 24	14,284	15,441	13,377	15,494	1,157	–2,064	2,117	8.1	–13.4	15.8	14.9	13.1	10.0	10.4	.8	–1.4	1.5
25 to 54	58,502	79,563	96,786	101,454	21,061	17,223	4,668	36.0	21.6	4.8	60.8	67.5	72.3	68.2	3.1	2.0	.5
25 to 34	24,203	34,591	33,833	30,842	10,388	–758	–2,992	42.9	–2.2	–8.8	25.2	29.4	25.3	20.7	3.6	–.2	–.9
35 to 44	17,317	27,232	36,556	35,455	9,915	9,324	–1,101	57.3	34.2	–3.0	18.0	23.1	27.3	23.8	4.6	3.0	–.3
45 to 54	16,982	17,739	26,397	35,157	757	8,658	8,760	4.5	48.8	33.2	17.7	15.1	19.7	23.6	.4	4.1	2.9
55 and over	14,317	14,904	15,974	22,974	587	1,070	6,999	4.1	7.2	43.8	14.9	12.6	11.9	15.4	.4	.7	3.7
55 to 64	11,422	11,894	12,146	18,753	472	252	6,607	4.1	2.1	54.4	11.9	10.1	9.1	12.6	.4	.2	4.4
65 and over	2,895	3,010	3,828	4,221	115	818	393	4.0	27.2	10.3	3.0	2.6	2.9	2.8	.4	2.4	1.0
65 to 74	2,472	2,594	3,194	3,300	122	600	106	4.9	23.1	3.3	2.6	2.2	2.4	2.2	.5	2.1	.3
75 and over	425	417	634	921	–8	217	286	–1.9	52.1	45.1	.4	.4	.5	.6	–.2	4.3	3.8
Men, 16 years and over	57,174	65,422	72,087	78,226	8,248	6,665	6,139	14.4	10.2	8.5	59.5	55.5	53.8	52.6	1.4	1.0	.8
16 to 24	12,752	12,250	11,147	12,848	–502	–1,103	1,701	–3.9	–9.0	15.3	13.3	10.4	8.3	8.6	–.4	–.9	1.4
16 to 19	4,886	4,102	4,043	4,551	–784	–59	508	–16.0	–1.4	12.6	5.1	3.5	3.0	3.1	–1.7	–.1	1.2
20 to 24	7,866	8,148	7,104	8,297	282	–1,044	1,193	3.6	–12.8	16.8	8.2	6.9	5.3	5.6	.4	–1.4	1.6
25 to 54	35,578	44,406	51,999	52,908	8,828	7,593	909	24.8	17.1	1.7	37.0	37.7	38.8	35.5	2.2	1.6	.2
25 to 34	14,784	19,383	18,431	16,469	4,599	–952	–1,962	31.1	–4.9	–10.6	15.4	16.4	13.8	11.1	2.7	–.5	–1.1
35 to 44	10,500	15,029	19,602	18,478	4,529	4,573	–1,124	43.1	30.4	–5.7	10.9	12.8	14.6	12.4	3.7	2.7	–.6
45 to 54	10,293	9,994	13,967	17,961	–299	3,973	3,994	–2.9	39.8	28.6	10.7	8.5	10.4	12.1	–.3	3.4	2.5
55 and over	8,846	8,765	8,941	12,470	–81	176	3,529	–.9	2.0	39.5	9.2	7.4	6.7	8.4	–.1	.2	3.4
55 to 64	7,020	6,954	6,693	9,919	–66	–261	3,226	–.9	–3.7	48.2	7.3	5.9	5.0	6.7	–.1	–.4	4.0
65 and over	1,826	1,811	2,247	2,551	–15	436	304	–.8	24.1	13.5	1.9	1.5	1.7	1.7	–.1	2.2	1.3
65 to 74	1,544	1,552	1,872	1,999	8	320	127	.5	20.6	6.8	1.6	1.3	1.4	1.3	.1	1.9	.7
75 and over	282	260	375	552	–22	115	177	–7.8	44.1	47.2	.3	.2	.3	.4	–.8	3.7	3.9
Women, 16 years and over	38,983	52,413	61,857	70,620	13,430	9,444	8,764	34.5	18.0	14.2	40.5	44.5	46.2	47.4	3.0	1.7	1.3
16 to 24	10,588	11,117	10,036	11,570	529	–1,081	1,534	5.0	–9.7	15.3	11.0	9.4	7.5	7.8	.5	–1.0	1.4
16 to 19	4,170	3,824	3,763	4,373	–346	–61	610	–8.3	–1.6	16.2	4.3	3.2	2.8	2.9	–.9	–.2	1.5
20 to 24	6,418	7,293	6,273	7,197	875	–1,020	924	13.6	–14.0	14.7	6.7	6.2	4.7	4.8	1.3	–1.5	1.4
25 to 54	22,924	35,158	44,787	48,546	12,234	9,629	3,759	53.4	27.4	8.4	23.8	29.8	33.4	32.6	4.4	2.5	.8
25 to 34	9,419	15,208	15,403	14,373	5,789	195	–1,030	61.5	1.3	–6.7	9.8	12.9	11.5	9.7	4.9	.1	–.7
35 to 44	6,817	12,204	16,954	16,977	5,387	4,750	23	79.0	38.9	.1	7.1	10.4	12.7	11.4	6.0	3.3	.0
45 to 54	6,689	7,746	12,430	17,196	1,057	4,684	4,766	15.8	60.5	38.3	7.0	6.6	9.3	11.6	1.5	4.8	3.3
55 and over	5,471	6,139	7,033	10,504	668	894	3,471	12.2	14.6	49.3	5.7	5.2	5.3	7.1	1.2	1.4	4.1
55 to 64	4,402	4,940	5,452	8,834	538	512	3,382	12.2	10.4	62.0	4.6	4.2	4.1	5.9	1.2	1.0	4.9
65 and over	1,069	1,199	1,581	1,670	130	382	89	12.2	31.9	5.6	1.1	1.0	1.2	1.1	1.2	2.8	.5
65 to 74	928	1,042	1,321	1,301	114	279	–20	12.3	26.8	–1.5	1.0	.9	1.0	.9	1.2	2.4	–.2
75 and over	142	157	260	369	15	103	110	10.6	65.4	42.2	.1	.1	.2	.2	1.0	5.2	3.6
White	84,767	101,801	113,108	123,581	17,034	11,307	10,473	20.1	11.1	9.3	88.2	86.4	84.4	83.0	1.8	1.1	.9
Men	51,033	57,217	61,783	66,008	6,184	4,566	4,225	12.1	8.0	6.8	53.1	48.6	46.1	44.3	1.2	.8	.7
Women	33,735	44,584	51,325	57,572	10,849	6,741	6,248	32.2	15.1	12.2	35.1	37.8	38.3	38.7	2.8	1.4	1.2
Black, 16 years and over	9,561	12,654	15,134	17,225	3,093	2,480	2,091	32.4	19.6	13.8	9.9	10.7	11.3	11.6	2.8	1.8	1.3
Men	5,101	6,373	7,264	7,996	1,272	891	732	24.9	14.0	10.1	5.3	5.4	5.4	5.4	2.3	1.3	1.0
Women	4,460	6,281	7,869	9,229	1,821	1,588	1,360	40.8	25.3	17.3	4.6	5.3	5.9	6.2	3.5	2.3	1.6

Table 7. Continued—Civilian labor force by sex, age, race, and Hispanic origin, 1976, 1986, 1996, and projected 2006

[Numbers in thousands]

Group	Level				Change			Percent change			Percent distribution				Annual growth rate (percent)		
	1976	1986	1996	2006	1976–86	1986–96	1996–2006	1976–86	1986–96	1996–2006	1976	1986	1996	2006	1976–86	1986–96	1996–2006
Asian and other, 16 years and over [1]	1,822	3,371	5,703	8,041	1,549	2,332	2,338	85.0	69.2	41.0	1.9	2.9	4.3	5.4	6.3	5.4	3.5
Men	1,037	1,825	3,039	4,222	788	1,214	1,183	76.0	66.5	38.9	1.1	1.5	2.3	2.8	5.8	5.2	3.3
Women	785	1,546	2,664	3,818	761	1,118	1,155	96.9	72.3	43.4	.8	1.3	2.0	2.6	7.0	5.6	3.7
Hispanic, origin, 16 years and over [2]	...	8,076	12,774	17,401	...	4,698	4,627	...	58.2	36.2	...	6.9	9.5	11.7	...	4.7	3.1
Men	...	4,948	7,646	10,235	...	2,698	2,589	...	54.5	33.9	...	4.2	5.7	6.9	...	4.4	3.0
Women	...	3,128	5,128	7,166	...	2,000	2,038	...	63.9	39.8	...	2.7	3.8	4.8	...	5.1	3.4
Other than Hispanic origin, 16 years and over [2]	...	109,758	121,169	131,446	...	11,411	10,276	...	10.4	8.5	...	93.1	90.5	88.3	...	1.0	.8
Men	...	60,474	64,441	67,991	...	3,967	3,550	...	6.6	5.5	...	51.3	48.1	45.7	...	.6	.5
Women	...	49,285	56,729	63,454	...	7,444	6,725	...	15.1	11.9	...	41.8	42.4	42.6	...	1.4	1.1
White non-Hispanic, 16 and over	...	94,026	100,915	108,166	...	6,890	7,251	...	7.3	7.2	...	79.8	75.3	72.7	...	.7	.7
Men	...	52,442	54,451	56,856	...	2,009	2,405	...	3.8	4.4	...	44.5	40.7	38.2	...	.4	.4
Women	...	41,583	46,464	51,310	...	4,881	4,846	...	11.7	10.4	...	35.3	34.7	34.5	...	1.1	1.0

[1] The "Asian and other" group includes (1) Asians and Pacific Islanders and (2) American Indians and Alaska Natives. The historical data are derived by subtracting "black" from the "black and other" group; projections are made directly, not by subtraction.

[2] Data by Hispanic origin are not available before 1980.

Projected changes in the labor force

With population expected to continue increasing at a slower rate, the labor force also is projected to grow more slowly over the 1996–2006 period than it did over the 1986 to 1996 period.[7] The labor force itself will change in composition as well, as various age, race or Hispanic groups, and men and women will experience change at different rates.

Age. The youth labor force (aged 16 to 24) is projected to increase by 3.2 million, reversing the drop of the earlier period. The 2006 youth labor force is projected to be larger than those in 1976, 1986, and 1996. For the labor force aged 25 to 54, the story is different. The projected increase of 4.7 million is about a fourth of the 1986–96 period. Those aged 25 to 34, whose number decreased over the 1986–96 period by three quarters of a million are projected to drop a further 3 million. The 35- to 44-age group, which increased by 9.3 million over the 1986–96 period, is projected to drop by 1.1 million. Only the 45- to 54-age group is expected to increase in size; but even this group, made up of the younger members of the baby-boom generation, is expected to increase at a much slower rate than earlier. The smaller, younger age groups are those following the baby-boom generation.

The labor force of older workers—identified as having the fastest rates of population growth and the greatest increases in labor force participation—is expected to grow by 7 million. Within that group, the 55 to 64 group is expected to add 6.6 million. Although the population of the 65- to 74-age group (the birth dearth of the thirties) is projected to drop, this cohort is expected to increase their labor force size due to rising labor force participation rates.

Sex. The labor force of men is projected to grow by .8 percent annually, while that of women is expected to grow by 1.3 percent. These represent slowing from the 1986–96 period, because population is expected to grow more slowly and because women's labor force participation rates are expected to increase more slowly. Women's share of the labor force is projected to increase from 46 percent to 47 percent.

Race and Hispanic origin. The Hispanic population has been growing and is expected to continue to grow faster than the black population, as a result, the Hispanic labor force will eventually be larger than the black labor force. The current projection indicates that this will occur in 2006. Given that projections have errors and the possibility that the method for enumerating race and Hispanic origin could change, the specificity of the year should be viewed with caution.[8] How-

ever, by the middle of the next decade, the Hispanic labor force should exceed that of blacks.

The Asian and other group's population is also growing rapidly. However, they are expected to remain the smallest of the four labor force groups well beyond 2006. Similarly, the white non-Hispanic group, which is growing slowly, will remain the largest group. They made up 80 percent of the labor force in 1986; their 2006 share is expected to be 73 percent. Their 2006 labor force would be 14 million larger than that in 1986. The remaining three groups are expected to add 7 million persons to the labor force over the same period. White non-Hispanics will remain by far the largest group of the labor force for years after 2006.

Dynamics

From 1996 and 2006, the dynamics of the labor force change emerge from three distinct groups: *entrants*; those who will be in the labor force in 2006, but who were not in it in 1996; *leavers*, those who will exit the labor force after 1996 and before 2006; and *stayers*, those who were in the labor force in 1996 and will remain through 2006.[9] To the extent that the demographic composition of labor force entrants between 1996 and 2006 is different from the composition of those now in the labor force, the 2006 labor force will be different from today's labor force. But the labor force also is affected by the demographic composition of those leaving. Thus, the labor

Table 8. Civilian labor force, 1986 and 1996, and projected 2006, and entrants and leavers, actual 1986–96 and projected, 1996–2006

Group	1986	1986–96			1996	1996–2006			2006
		Entrants	Leavers	Stayers		Entrants	Leavers	Stayers	
Numbers									
Total	117,834	34,564	18,455	99,380	133,944	39,670	24,768	109,176	148,847
Men	65,422	18,016	11,352	54,071	72,087	19,978	13,839	58,248	78,226
Women	52,412	16,548	7,103	45,309	61,857	19,692	10,929	50,928	70,620
White non-Hispanic	94,026	22,229	15,339	78,686	100,915	24,214	16,963	83,952	108,166
Men	52,442	11,601	9,592	42,851	54,451	12,132	9,728	44,724	56,856
Women	41,583	10,628	5,748	35,836	46,464	12,082	7,236	39,228	51,310
Black non-Hispanic	12,483	4,295	1,983	10,501	14,795	6,191	5,003	9,792	15,983
Men	6,279	1,895	1,083	5,196	7,091	2,807	2,550	4,541	7,347
Women	6,204	2,400	900	5,304	7,704	3,384	2,453	5,251	8,636
Hispanic origin	8,076	5,478	780	7,296	12,774	5,920	1,293	11,481	17,401
Men	4,948	3,211	513	4,435	7,646	3,365	776	6,870	10,235
Women	3,128	2,267	267	2,861	5,128	2,555	516	4,611	7,166
Asian and other, non-Hispanic	3,249	2,562	352	2,897	5,459	3,346	1,508	3,951	7,296
Men	1,753	1,310	164	1,589	2,899	1,674	785	2,114	3,788
Women	1,496	1,253	188	1,308	2,561	1,671	724	1,837	3,508
Share [percent]									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Men	55.5	52.1	61.5	54.4	53.8	50.4	55.9	53.4	52.6
Women	44.5	47.9	38.5	45.6	46.2	49.6	44.1	46.6	47.4
White non-Hispanic	79.8	64.3	83.1	79.2	75.3	61.0	68.5	76.9	72.7
Men	44.5	33.6	52.0	43.1	40.7	30.6	39.3	41.0	38.2
Women	35.3	30.7	31.1	36.1	34.7	30.5	29.2	35.9	34.5
Black non-Hispanic	10.6	12.4	10.7	10.6	11.0	15.6	20.2	9.0	10.7
Men	5.3	5.5	5.9	5.2	5.3	7.1	10.3	4.2	4.9
Women	5.3	6.9	4.9	5.3	5.8	8.5	9.9	4.8	5.8
Hispanic origin	6.9	15.8	4.2	7.3	9.5	14.9	5.2	10.5	11.7
Men	4.2	9.3	2.8	4.5	5.7	8.5	3.1	6.3	6.9
Women	2.7	6.6	1.4	2.9	3.8	6.4	2.1	4.2	4.8
Asian and other, non-Hispanic	2.8	7.4	1.9	2.9	4.1	8.4	6.1	3.6	4.9
Men	1.5	3.8	.9	1.6	2.2	4.2	3.2	1.9	2.5
Women	1.3	3.6	1.0	1.3	1.9	4.2	2.9	1.7	2.4

force of 2006 may be regarded as consisting of the labor force of 1996, plus the entrants, less the leavers.

BLS projects that between 1996 and 2006, 40 million workers will enter the labor force and 25 million will leave. (See table 8.) These figures compare with 34.6 million entrants and 18.4 million leavers over the 1986–96 period. The entrants are projected to be almost equally women and men. In the earlier period, entrants were more likely to be men. The leavers are more likely to be men, because the male labor force is older than that of women, but the vast difference in share exhibited for the 1986–96 period is projected to narrow somewhat.

According to these projections, by 2006, 20 million men will have joined the 1996 labor force of 72.1 million, and 13.8 million men will have left the labor force, resulting in a labor force of 78.2 million men in 2006. Similarly, 19.7 million women are expected to enter the labor force over the period 1996–2006, while 10.9 million women are projected to leave. The relatively fewer women leaving the labor force would raise their share of the labor force from 46.2 percent in 1996 to 47.4 percent in 2006.

BLS is projecting that the number of entrants over the 1996–2006 period will be larger than the 34.6 million who entered during the 1986–96 period. The number projected to leave the labor force is expected to increase by 34 percent. Slightly more men than women entered the labor force, 52 percent compared with 48 percent, in the 1986–96 period. In the 1996–2006 period, women and men are expected enter in nearly equal numbers.

Race and Hispanic origin. The largest share of the 1996 labor force—75 percent—was made up of non-Hispanic whites. Three-fifths of the population expected to enter the labor force between 1996 and 2006 are projected to be non-Hispanic whites, less than their share over the 1986–96 period. These proportions are smaller than their share of the work force, reflecting this group's lower population growth. As a result of the 24.2 million non-Hispanic whites entering the labor force, and the 17.0 million leaving over the 1996–2006 period, the share of non-Hispanic whites in the labor force is projected to be 73 percent in 2006—a drop of 3 percentage points and down 7 percentage points from 1986. In the 1986–96 period, white non-Hispanic men supplied the most entrants; 34 percent. More striking, they supplied most of those leaving; 52 percent.

The labor force of white non-Hispanics is projected to grow 0.7 percent per year, slower than the overall labor force. The slower growth reflects little migration of this demographic group to the United States and lower birth rates in the past, compared with other population groups. This results in relatively fewer labor force entrants and relatively more labor force leavers, a reflection of the aging of the white male labor force. White non-Hispanic women are projected to increase their participation more than any other group, but this faster growth rate is not enough to offset the slow growth in the non-Hispanic population of only 0.6 percent yearly. White non-Hispanic men are projected to have the least drop in labor force participation of any group of men.

Blacks, the second largest group in the 1996 labor force, made up 11.0 percent of the labor force. (This number reflects an adjustment, placing Hispanic blacks with Hispanics rather than with non-Hispanic blacks.) Blacks are projected to add 6.2 million workers to the labor force between 1996 and 2006—16 percent of all new entrants during the period. This is more than the number that entered between 1986 and 1996. With the 5.0 million black non-Hispanics projected to leave the labor force over the period, the group will increase in number, and by 2006, their share of the labor force is expected to be 10.7 percent, down from 11.0 in 1996. The black labor force is projected to grow slightly faster than the overall labor force because of their higher than average population growth resulting from higher than average birth rates and immigration.

In 1996, Hispanics (of all races) were the third largest labor force group, with 12.8 million workers representing 9.5 percent of the labor force. Because of their higher levels of immigration, some 5.9 million Hispanics are projected to enter the labor force during the 1996–2006 period. Only 1.2 million Hispanics are projected to leave the labor force (reflecting their relatively young age composition), so the number of Hispanics in the labor force is projected to grow by more than 4.6 million. By 2006, the Hispanic labor force is projected to be greater than the black non-Hispanic labor force.[10] The Hispanic labor force is projected to grow 3.1 percent annually, increasing to 17.4 million persons in 2006. The Hispanic share of the labor force is expected to increase more than that of any other demographic group because of overall population growth—from higher births and increased immigration—and because of increases in the participation rate of Hispanic women.

Currently, the smallest racial group in the labor force is Asian and other. About 3.3 million members of this group will enter the labor force during the 1996–2006 period, about the size of its 1986 labor force. Because relatively fewer workers of this group are projected to leave the labor force over the period, the group is projected to increase by 41 percent. The number of Asians and others in the labor force is projected to grow 3.5 percent annually. Increases in the number of Asians and others in the labor force reflect their continued high immigration. Decreases in labor force participation by men offset a portion of the increase.

Implications of the aging labor force

Median age. The age of the labor force can be measured in various ways; one is median age. As the baby-boom genera-

tion entered the labor force, the median age of the labor force decreased; once in the labor force, this large group can only age, so the median age has been rising. The median age of the labor force was 40.5 years in 1962, (the highest level attained before the baby boomers entered the labor force), it dropped steadily until 1980, and since then, it has been rising. With the population projected to continue aging as rapidly as in the past, the median age of the labor force in 2006 is projected to just exceed the level reached in 1962. (See table 9.)

For much of the 1962–96 period, the male labor force has been older than the female labor force. This age difference reflected a pattern of women entering the labor force, then leaving for a period after childbirth. The ages of the male and female labor force are projected to diverge, reflecting the higher participation of older women, the slowing in participation of younger women, and the withdrawal of older men from the labor force.

Historically, white participants in the labor force have been older than the rest of the labor force. This is projected to continue, with the difference reaching 0.6 year in 2006. Compared with the whites, black and Hispanic groups are younger, reflecting their higher birth rates, and as a result, youth claim a somewhat larger share of their respective populations. Black participants in the labor force have been about 1.5 years to 2.5 years younger than the overall labor force; this age gap is projected to continue to 2006. The group of Asians and other participants in the labor force have been slightly younger than the overall labor force, but by 1996, this group was more than 1 year younger. This is expected to continue by 2006. Hispanic participants generally have been younger, due to their higher fertility rate. This group is projected to continue having a lower median age than the overall labor force, but it is projected to age from a median of 34.1 years in 1996 to 36.4 years in 2006, reflecting the aging of earlier immigrants. The median age of all race and Hispanic groups is expected to increase between 1996 and 2006.

Table 9. Median ages of the labor force, by sex, race, and Hispanic origin, selected historical years and projected 2006

Group	1962	1966	1976	1986	1996	2006
Total	40.5	40.3	35.3	35.3	38.2	40.6
Men	40.5	40.4	36.0	35.6	38.2	40.5
Women	40.4	40.1	34.4	34.9	38.2	40.8
White	40.9	40.3	35.6	35.5	42.5	41.2
Black[1]	38.3	31.2	33.1	33.8	36.3	38.2
Asian and other[2]	[3]	[3]	32.4	35.5	36.9	38.4
Hispanic origin[4]	[5]	[5]	[5]	32.6	34.1	36.4

[1] For 1962 and 1966 data are for black and other.
[2] The "Asian and other" group includes Asians and Pacific Islanders and American Indians and Alaskan Natives. The historic data are derived by subtracting "Black" from the "Black and other" group; projections are made directly.
[3] Data for Asian and other are not available before 1972.
[4] Persons of Hispanic origin may be of any race.
[5] Data for Hispanic origin are not available before 1980.

Age composition. There are other ways to look at the age structure of the labor force. For example, if the labor force is aging, the proportion of those 65 and older in the labor force would be increasing and the proportion of those under 25 would be decreasing. Table 10 presents such information for

Table 10. Distribution of the population and labor force by age and sex, 1976, 1986, 1996, and projected 2006

[Percent]

Group	Population				Labor force			
	1976	1986	1996	2006	1976	1986	1996	2006
Total, 16 years and over	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
16 to 24	22.9	18.9	16.1	17.2	24.3	19.8	15.8	16.4
25 to 39	28.0	33.2	31.2	25.4	34.4	42.4	39.4	32.0
40 and over	49.1	47.9	52.7	57.4	41.3	37.8	44.8	51.6
65 and over	14.1	15.2	15.8	15.2	3.0	2.6	2.9	2.8
75 and over	5.2	5.8	6.7	7.0	.4	.4	.5	.6
Men, 16 years and over	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
16 to 24	23.7	19.5	16.8	18.4	22.3	18.7	15.5	16.4
25 to 39	28.7	34.3	32.0	26.0	35.3	42.6	39.7	32.4
40 and over	47.6	46.2	51.2	55.7	42.4	38.7	44.8	51.2
65 and over	12.3	13.2	13.9	13.5	3.2	2.8	3.1	3.3
75 and over	4.1	4.5	5.3	5.6	.5	.4	.5	.7
Women, 16 years and over	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
16 to 24	22.1	18.2	15.5	16.2	27.2	21.2	16.2	16.4
25 to 39	27.3	32.3	30.5	24.9	33.1	42.1	38.9	31.7
40 and over	50.5	49.5	54.1	58.9	39.7	36.7	44.8	52.0
65 and over	15.8	17.0	17.7	16.8	2.7	2.3	2.6	2.4
75 and over	6.2	7.0	8.0	8.3	.4	.3	.4	.5

the population and labor force aged 16 and older, by sex.

From 1976 to 1986 and to1996, the proportion of those 65 and older in the population increased, but by 2006, it is expected to decrease slightly. The proportion of persons under 25 (specifically, 16 to 24) decreased between 1986 and 1996. However, the proportion is expected to increase by 2006. The population is getting older, based on the median age, and younger, based on proportions! For each successive decade, the proportion of 25- to 39-year olds has decreased or is expected to decrease.

Looking at the composition of the population by sex, the same general patterns hold. However, the male population has proportionately more youth than the female population, reflecting their higher proportion of births and slightly higher current immigration. Relatively more women are in the older ages. This does not show the relative sizes of women and men's population groups, as does table 2. It only indicates that the women's population is older, that is, it has a greater share of their population in the older ages.

The age structure of the *labor force*, 16 and older is different from that of the *population*, 16 and older. Fewer persons in the labor force are 65 and older. The youth labor force is also a smaller share of the labor force than of the population. Of course, those aged 25 to 64 must be a greater share. However, between 1996 and 2006, the youth share of the labor force is projected to increase. The baby-boom generation may be followed by observing that in 1976, they were in the youth group, but by 1986, the share of the labor force aged 25 to 39 had increased by 8 percentage points. By 2006, this age group's share of the labor force should be less than it was in 1976. In 1996, 45 percent of the labor force was age 40 or older; by 2006, more than half the labor force will be in this age category.

Historically, the female labor force has been young. In 1976, women 16 to 24 were 27 percent of the labor force, greater than the share for men. The share of the female labor force aged 25 and older was thus less. Their share appears to be evenly divided between the age groups 25 to 39 and 40 to 64, as the proportions of women 65 and older in the labor force were comparable to the figures for men. By 1996, these differences had narrowed significantly. However, the differences in share at the older ages had increased and are projected to continue increasing. The proportion of men 65 and older increased between 1986 and 1996 and is projected to increase, while the share for women declined and is expected to continue decreasing.

Economic dependency

In 1987, for the first time ever, more Americans were in the labor force than were not. This status is projected to prevail throughout the entire projection period, with the proportion of those not working to those who are working reaching a low of 92.5 per 100 workers in 2006. This measure of dependency is the number of those in the total population (including Armed Forces overseas and children) who are not in the labor force per 100 of those who are in the labor force. (See table 11.) For every 100 persons in the 1996 labor force, about 96 were not. Of this group, about 45 were children, 28 were 16 to 64 years of age, and 22 were older than 64.

Upon examining these ratios (the economic dependency ratio), for various age groups, one can see that this drop is attributable to the change in the number of children. As the number of births diminished and the baby boom moved to ages older than 16, the total economic dependency ratio dropped. Most of the 31-percentage point drop for the total population between 1975 and 1996 was because of the decline in the number of births. The portion of the ratio attributed to children is projected to continue dropping, despite somewhat higher fertility. The remainder of the historical drop is attributable to higher labor force participation for women aged 16 to 64. The ratio for the 16- to 64-age group dropped 16 points, from 44.2 in 1975 to 28.0 in 1996. This ratio is projected to increase, reflecting the projected decrease in participation of men and of young women aged 16 to 24.

The part of the dependency ratio that has been steadily increasing is the portion attributable to older persons. In 1975, this was by far the smallest part of the dependency ratio, and by 2006, is expected to still be the smallest proportion. However, between 1975 and 1990, the older persons' dependency ratio grew 1.4 percentage points; it is projected to fall again, to 21.0 older retired persons per 100 workers in 2006—a level below that of 1985. With what we now believe to be the composition of the population after 2006, it is clear that the overall dependency ratio will rise some time after 2010; but it may never reach the levels of 1975.

For much of the open discussion about our aging population, the dependency ratios in table 11 for the 65 and older population has been expressed, not as nonworkers per worker,

Table 11. Economic dependency ratio, 1975–96 and projected 2006, by age

[Per hundred in the labor force]

Group	1975	1980	1985	1990	1996	2006
Total population ...	126.3	108.9	103.3	98.3	95.5	92.5
Under 16	61.4	50.7	47.3	45.8	45.3	42.4
16 to 64	44.2	37.4	34.2	30.5	28.0	29.1
65 and over	20.7	20.8	21.8	22.1	22.1	21.0
Number of persons in the labor force per those 65 and over not in the labor force	4.8	4.8	4.6	4.5	4.5	4.8

but as workers per nonworker. For the 65 and older population, that number is shown in the last line of the table. It shows remarkable stability over the 1975–2006 period.

THE 2006 LABOR FORCE is expected to have a greater proportion of women and Hispanics than the 1996 labor force. Between 1996 and 2006, 40 million workers are projected to enter the labor force, 25 million are expected to leave and 109 million workers are expected to remain in the labor force. As a result, the labor force in 2006 would be 149 million, up 15 million from the 1996 level. This represents a rate of growth as slow as the growth experienced in the 1950s. □

Footnotes

[1] The civilian labor force consists of employed and unemployed persons actively seeking work, but does not include any Armed Forces personnel. Historical data for this series are from the Current Population Survey, conducted by the Bureau of the Census for the Bureau of Labor Statistics.

[2] The race and Hispanic origin categories correspond to those promulgated in the Office of Management and Budget Directive No. 15, 1978. These categories are being reviewed by OMB, and a new directive could be issued between the time these projections were completed and their publication. The range of alternatives being considered could change the relative sizes of the black and Hispanic populations and labor forces.

[3] The projections presented in this article replace those described by Howard N Fullerton, Jr., in "The 2005 labor force: growing, but slowly," *Monthly Labor Review*, November 1995, pp. 29–44. BLS routinely reviews and revises its economic and employment projections every 2 years.

[4] "Population Projections of the United States, by Age, Sex, Race, and Hispanic Origin: 1995 to 2050," *Current Population Reports*, Series P-25, No. 1130 (Washington, Bureau of the Census, 1995). The population projections are based on estimates derived from the 1990 Census of Population and reflect findings from the 1990 Census of Population. They are not adjusted for the undercount.

[5] For a recent discussion of migration theories, see Douglas S. Massey, Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino, and J. Edward Taylor, "Theories of International Migration: A Review and Appraisal," *Population and Development Review*, September 1993, pp. 431–66.

[6] The change in the population groups, 69 to 74 and 75 and older cause the increase in participation for the entire 65 and older group to be less than that for either age group.

[7] The projected labor force numbers are consistent with the new population controls introduced in the January 1997 Current Population Survey. These new controls had little impact on the size of the aged 16 and older population, but within race groups the change shifted populations from non-Hispanic to Hispanic. For further information, see "Revisions in the Current Population Survey Effective January 1997," *Employment and Earnings*, February 1997, pp. 3–5.

[8] For the most recent evaluation of BLS labor force projections, see Howard N Fullerton, Jr., "An evaluation of labor force projections to 1995," *Monthly Labor Review*, September 1997, pp. 5–9.

[9] Entrants and leavers are computed by comparing the labor force numbers for birth cohorts at two points in time. If the labor force numbers at the second point are larger, the difference is termed the "entrants." If the labor force numbers at the second point are smaller, the difference is the "leavers." These concepts understate the numbers likely to enter and leave the labor force over the period covered by the two points in time, but are still a valid comparison. As with measures of geographic mobility, which also do not measure all the changes over a period, we do not call these net entrants and leavers. For a further discussion of the methods, see Howard N Fullerton, Jr., "Measuring Rates Of Labor Force Dynamics," *Proceedings of the Social Statistics Section*, American Statistical Association, 1993.

[10] In table 8, all racial and Hispanic origin groups have been adjusted to place Hispanics together. This is different than how numbers are presented in the other tables, specifically table 1.

Employment outlook: 1996–2006

Industry output and employment projections to 2006

The service-producing sector continues to lead projected employment growth; the 10 industries with the largest projected job growth are all service producers and account for 60 percent of the net increase in nonfarm wage and salary employment

James C. Franklin

Over the 1996–2006 period, total employment in the United States is projected to increase by 18.6 million, from 132.4 million to 151 million. The projected annual average rate of growth is 1.3 percent, slower than the 1.7-percent annual average rate of growth from 1986 to 1996. The increase of 17.6 million (from 118.7 million to 136.3 million) in nonfarm wage and salary jobs accounts for nearly all of the increase in total employment. The number of agricultural workers—self-employed persons, unpaid family workers, and wage and salary workers, combined—is projected to decline by 24,000. Private household wage and salary jobs also are projected to decline, by 153,000. The remaining portion of growth in total jobs is accounted for by an increase of 1.2 million in nonagricultural self-employed and unpaid family workers. (See table 1.)

The macroeconomic factors whose combined influence most affects the growth of total employment are increases in the labor force,[1] in productivity,[2] and in the Nation's gross domestic product, or GDP. In the latest round of BLS projections, the labor force grows at an annual average rate of 1.1 percent during the 1996–2006 projection period. This is a slowing in the rate of growth compared to the 1.3-percent annual average rate of increase posted over the 1986–96 period. The growth rate of the nonfarm labor productivity index is projected to average 1.1 percent per year from 1996 through 2006, an increase from the 0.7-percent rate of change during the previous 10 years. The rate of growth for GDP during the projection period is 2.1 percent, a slight decline from the 2.3-percent average annual increase during the 1986–96 period. The overall picture, then, is one of an economy in which the rate of growth of both the labor force and GDP is slowing, but output, as measured by GDP, continues to outpace labor force growth because of productivity gains.

The service-producing sector, excluding private households, has a projected increase of 17.6 million nonfarm wage and salary jobs, from 94.3 million in 1996 to 111.9 million by 2006. Within the service-producing sector, employment growth is highly concentrated. During the 1986–96 period, 11.2 million, or 56 percent, of the 20.1 million increase in service-producing sector employment was concentrated in the services division. The projected 11.3 million gain in wage and salary jobs in the services division over the 1996–2006 period accounts for almost two-thirds of the projected 17.6 million increase in employment in the service-producing sector. The addition of job growth for retail trade (2.3 million), and for State and local government (1.8 million) to that for the services division accounts for 87 percent of the projected job gains in the service-producing sector.

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Table 1. Employment by major industry division, 1986, 1996, and projected 2006

Industry	Thousands of jobs			Change		Percent distribution			Average annual rate of change	
	1986	1996	2006	1986–96	1996–2006	1986	1996	2006	1986–96	1996–2006
Total[1]	111,374	132,352	150,927	20,978	18,575	100.0	100.0	100.0	1.7	1.3
Nonfarm wage and salary[2]	98,727	118,731	136,318	20,004	17,587	88.6	89.7	90.3	1.9	1.4
Goods producing	24,538	24,431	24,451	–107	20	22.0	18.5	16.2	.0	.0
Mining	778	574	443	–204	–131	.7	.4	.3	–3.0	–2.5
Construction	4,810	5,400	5,900	590	500	4.3	4.1	3.9	1.2	.9
Manufacturing	18,951	18,457	18,108	–493	–350	17.0	13.9	12.0	–.3	–.2
Durable	11,200	10,766	10,514	–433	–252	10.1	8.1	7.0	–.4	–.2
Nondurable	7,751	7,691	7,593	–60	98	7.0	5.8	5.0	–.1	–.1
Service producing	74,189	94,300	111,867	20,111	17,567	66.6	71.2	74.1	2.4	1.7
Transportation, communications, utilities	5,247	6,260	7,111	1,014	851	4.7	4.7	4.7	1.8	1.3
Wholesale trade	5,751	6,483	7,228	732	745	5.2	4.9	4.8	1.2	1.1
Retail trade	17,878	21,625	23,875	3,747	2,250	16.1	16.3	15.8	1.9	1.0
Finance, insurance, and real estate	6,275	6,899	7,651	625	752	5.6	5.2	5.1	1.0	1.0
Services[2]	22,346	33,586	44,852	11,240	11,266	20.1	25.4	29.7	4.2	2.9
Federal Government	2,899	2,757	2,670	–142	–87	2.6	2.1	1.8	.5	.3
State and local government	13,794	16,690	18,480	2,896	1,790	12.4	12.6	12.2	1.9	1.0
Agriculture[3]	3,327	3,642	3,618	314	–24	3.0	2.8	2.4	.9	–.1
Private household wage and salary	1,235	928	775	–307	–153	1.1	.7	.5	–2.8	–1.8
Nonagricultural self-employed and unpaid family workers[4]	8,085	9,051	10,216	966	1,165	7.3	6.8	6.8	1.1	1.2

[1] Employment data for wage and salary workers are from the BLS Current Employment Statistics (payroll) survey, which counts jobs, whereas self-employed, unpaid family worker, agricultural, and private household data are from the Current Population Survey (household survey), which counts workers.

[2] Excludes SIC 074,5,8 (agricultural services) and 99 (nonclassifiable establishments), and is therefore not directly comparable with data published in *Employment and Earnings*.

[3] Excludes government wage and salary workers, and includes private sector SIC 08, 09 (forestry and fisheries).

[4] Excludes SIC 08, 09 (forestry and fisheries).

The goods-producing sector, excluding agricultural products, has a slight projected increase of 20,000 wage and salary jobs, with employment remaining essentially stable at 24.4 million over the 1996–2006 period. However, strong productivity gains allow real gross duplicated output[3] to grow at a projected 2.3-percent annual rate. (See table 2.) At the major industry level on the goods-producing side, only construction is projected to post an employment gain. From the 1996 level of 5.4 million, construction is expected to add 500,000 jobs to reach a projected 2006 jobs level of 5.9 million. Employment in mining is projected to decline by 131,000, from a level of 574,000 in 1996 to 443,000 in 2006. Over the 1986–96 period, mining lost 204,000 jobs. Manufacturing is projected to decline by 350,000 jobs, from 18.5 million in 1996 to 18.2 million in 2006. The decline for manufacturing is about 30 percent less than the reduction of 493,000 jobs recorded over the previous 10-year period, 1986–96.

Service-producing industries

Employment growth in the services division is, overwhelmingly, the most important result of these projections. The services division is very diverse, providing a wide range of services to individuals and businesses. Of the 17.6 million increase in total nonfarm wage and salary jobs over the projection period, the services division is expected to account for 11.3 million, or 64 percent. This is an even greater share than over the 1986–96 period, when the division accounted for 56 percent of the growth of nonfarm wage and salary jobs. Employment in the services division has a projected annual growth rate of 2.9 percent—more than twice the rate for all nonfarm wage and salary jobs. Services division jobs increased as a share of total nonfarm wage and salary employment from 22.6 percent in 1986 to 28.3 percent in 1996. This share is projected to increase to 32.9 percent by 2006.

Within the service division, most of the projected job

growth is in just two industry groups: *business services*, with a job gain of 3.6 million, and *health services*, with an increase of 3.2 million. Together, these industry groups account for 59 percent of the job growth in the services division and 38 percent of the increase in total nonfarm wage and salary employment. The industry groups with the third and fourth largest projected job gains within the services division are *social services*, with a 1.1 million increase, and *engineering, management, and related services*,[4] with an increase of 1 million jobs. Together, these four industry groups account for 78 percent of job growth in the services division and 50 percent of the total increase in nonfarm wage and salary employment.

Health services. The health care industry continues to adapt to the economic realities of health care as a social and political issue.[5] Cost consciousness will continue to be a driving force, as will society's concern for the provision of health as a general public good. The aging of the population, driven by the graying of the baby-boom generation and an increase in the numbers of persons aged 85 and older, will continue to boost demand for health services. New technologies that permit the identification and treatment of conditions not previously treatable will be developed, but experience suggests that these are usually expensive when first brought to market. While medical innovation is often considered a hallmark of the quality of medical care in the United States, it also is often considered a driving factor in the rise in health care expenditures.[6]

During the early 1990s, the health care industry changed, reflecting the consolidation of health care institutions, the rise of the health maintenance organization (HMO), and, to a lesser extent, the spread of the managed care organization (MCO). These organizational changes in the industry have been mostly designed to place an emphasis on preventative medicine and to allow the use of cost-intensive medical technologies only when necessary. The health care industry has been successful to some degree in these efforts, but not to everyone's complete satisfaction. Certain practices of some HMO's have led to political backlash, as consumers complain of being denied what they perceive to be needed health care. The future of health care management will likely continue to be decided through political debate, as well as through industry efforts. Because of the aging population and advances in medical care,

Table 2. Output by major industry division (gross duplicated output), 1986, 1996, and projected 2006

Industry	Billions of chained 1992 dollars			Percent distribution			Average annual rate of change	
	1986	1996	2006	1986	1996	2006	1986–96	1996–2006
Total	9,391.1	12,059.9	15,568.1	100.0	100.0	100.0	2.5	2.6
Goods producing	3,344.5	4,222.8	5,281.0	35.6	35.0	33.9	2.4	2.3
Mining	147.7	140.1	136.7	1.6	1.2	.9	–.5	–.2
Construction	621.6	608.1	730.8	6.6	5.0	4.7	–.2	1.9
Manufacturing	2,575.6	3,474.6	4,414.0	27.4	28.8	28.4	3.0	2.4
Durable	1,306.6	1,908.8	2,560.5	13.9	15.8	16.4	3.9	3.0
Nondurable	1,270.4	1,566.3	1,864.6	13.5	13.0	12.0	2.1	
Service producing	5,700.0	7,462.5	9,847.6	60.7	61.9	63.3	2.7	2.8
Transportation, communications, utilities	765.4	982.6	1,336.0	8.1	8.1	8.6	2.5	3.1
Wholesale trade	494.0	749.7	1,090.9	5.3	6.2	7.0	4.3	3.8
Retail trade	712.5	977.0	1,236.7	7.6	8.1	7.9	3.2	2.4
Finance, insurance, and real estate	1,050.8	1,208.7	1,553.3	11.2	10.0	10.0	1.4	2.5
Services	1,509.8	2,184.9	3,101.0	16.1	18.1	19.9	3.8	3.6
Federal Government	323.9	307.6	305.5	3.4	2.6	2.0	–.5	–.1
State and local government	506.9	615.6	723.7	5.4	5.1	4.6	2.0	1.6
Agriculture	215.2	261.1	304.3	2.3	2.2	2.0	2.0	1.5
Private households	9.0	10.4	9.7	.1	.1	.1	1.5	–.7
Special industries [1]	447.8	546.5	630.6	4.8	4.5	4.1	2.0	1.4
Residual [2]	–325.4	–443.3	–505.1	–3.5	–3.7	–3.2	3.1	1.3

[1] Consists of nonproducing accounting categories to reconcile input-ouput system with NIPA accounts.

[2] Residual is shown for first level only. Subcategories do not necessarily add to higher categories as a byproduct of chainweighting.

SOURCE: Historical data from the Bureau of Economic Analysis, U.S. Department of Commerce; projections by the Bureau of Labor Statistics.

Table 3. Industries with fastest and slowest wage and salary employment growth, 1996–2006

Standard Industrial Classification	Industry description	Thousands of jobs		Change	Average annual rate of change
		1996	2006	1996–2006	1996–2006
	Fastest growing				
737	Computer and data processing services	1,207.9	2,509.1	1,301.2	7.6
807–809	Health services, n.e.c.	1,171.9	1,968.3	796.4	5.3
874	Management and public relations	873.2	1,400.0	526.8	4.8
473, 474, 478	Miscellaneous transportation services	204.3	327.4	123.1	4.8
836	Residential care	672.1	1,069.8	397.7	4.8
736	Personnel supply services	2,646.0	4,039.3	1,393.3	4.3
494–497, pt. 493	Water and sanitation	230.9	349.1	118.2	4.2
832, 839	Individual and miscellaneous social services	846.3	1,265.9	419.6	4.1
801–804	Offices of health practitioners	2,751.4	4,045.9	1,294.5	3.9
791, 799	Amusement and recreation services, n.e.c.	1,108.6	1,565.3	456.7	3.5
752–754	Automobile parking, repair, and services	890.3	1,236.2	345.9	3.3
805	Nursing and personal care facilities	1,732.2	2,377.0	644.8	3.2
792	Producers, orchestras, and entertainers	151.7	204.6	52.9	3.0
735	Miscellaneous equipment rental and leasing	237.8	320.2	82.4	3.0
62	Security and commodity brokers	551.4	740.4	189.0	3.0
472	Passenger transportation arrangement	212.9	277.2	64.3	2.7
835	Child day care services	569.3	733.5	164.2	2.6
732, 733, 738	Miscellaneous business services	2,022.8	2,599.3	576.5	2.5
84	Museums, botanical, zoological gardens	84.7	108.8	24.1	2.5
61, 67	Nondepository; holding and investment offices	725.6	928.2	202.6	2.5
	Most rapidly declining				
12	Coal mining	96.4	52.0	–44.4	–6.0
387	Watches, clocks, and parts	7.7	5.1	–2.6	–4.0
313, 314	Footwear, except rubber and plastic	46.5	30.8	–15.7	–4.0
381	Search and navigation equipment	160.7	109.5	–51.2	–3.8
131, 132	Crude petroleum, natural gas, and gas liquids	148.2	101.5	–46.7	–3.7
311, 315-317, 319	Luggage, handbags, and leather products, n.e.c.	49.4	34.4	–15.0	–3.6
21	Tobacco products	41.4	30.3	–11.1	–3.1
341	Metal cans and shipping containers	39.0	28.6	–10.4	–3.1
301	Tires and inner tubes	79.5	59.3	–20.2	–2.9
386	Photographic equipment and supplies	84.9	65.1	–19.8	–2.6
362	Electrical industrial apparatus	156.0	122.4	–33.6	–2.4
291	Petroleum refining	100.2	79.5	–20.7	–2.3
363	Household appliances	121.0	96.4	–24.6	–2.2
331	Blast furnaces and basic steel products	240.3	196.7	–43.6	–2.0
...	State and local government enterprises, n.e.c.	598.2	490.2	–108.0	–2.0
361	Electric distribution equipment	81.7	67.5	–14.2	–1.9
88	Private households	928.0	775.2	–152.8	–1.8
208	Beverages	178.5	149.3	–29.2	–1.8
10	Metal mining	53.8	45.0	–8.8	–1.8
231–238	Apparel	642.9	475.1	–167.8	–3.0

NOTE: n.e.c. = not elsewhere classified.

it seems reasonable to expect continued strong growth in the medical care industry.

The projected growth rate for employment in health services is 2.9 percent, slightly more than twice that for total nonfarm wage and salary jobs. Over the 1986–96 period, health services employment grew at an annual rate of 3.8 percent, compared with 1.9 percent for total nonfarm job growth. Health services employment grew from 6.5 million in 1986 to 9.5 million in 1996, and is projected to increase to 12.6 million by 2006. The growth in health services employment accounted for 14.7 percent of the increase in total nonfarm jobs during the 1986–96 period, and is expected to account for 18.2 percent of the growth from 1996 through 2006. Within the health services sector, the *private hospitals* industry is projected to be the slowest growing, with jobs increasing at a 1.0-percent annual rate. Consolidation and cost-cutting policies by hospitals striving to compete with HMO's are expected to continue taking their toll throughout the projection period. *Offices of practitioners*, with projected annual growth of 3.9 percent, and *nursing and personal care facilities*, with growth of 3.2 percent yearly, both have projected rates of employment increase that place them among the fastest growing industries. (See table 3.) The remaining health industry, *health services not elsewhere classified*, with a projected annual in-

crease of 5.3 percent, is the second fastest growing industry due to the expansion of the home health care industry and of medical and dental laboratories.

Business services. Employment in this industry group grew at a 6.3-percent annual rate from 3.9 million in 1986 to 7.3 million in 1996. This rate of increase made it the fastest growing industry group during that period. The group's projected level of employment, 10.8 million, reflects an increase of 3.6 million, the equivalent of a 4.1-percent rate of employment growth through 2006. Although the projected rate of increase for business services employment is slower than that posted for the 1986–96 period, it will still be the fastest rate for any industry group. (See table 3.)

Among the six detailed industries within the business services group, the three that added the most jobs over the 1986–96 period accounted for 90 percent of the employment growth in business services. They are *personnel supply services*,[7] made up mostly of temporary help services, and adding 1.7 million jobs at a 10.3-percent annual growth rate; *miscellaneous business services* (credit reporting agencies; mailing and commercial art and photography services; detective, guard, and security services; news syndicates; photo finishing labs; and all other business services), adding 715,000 at a 4.5-percent rate of growth; and *computer and data processing services*,[8] adding 620,000 at an annual growth rate of 7.5 percent. (See table 4.) Over the projection period, employment in the personnel supply services industry is expected to increase by 4.3 percent per year, on average, and to gain 1.4 million jobs. Computer and data processing services, with a 7.6-percent annual rate of growth, is projected to add 1.3 million jobs. Miscellaneous business services, growing by 2.5 percent per year, has a projected gain of 577,000 jobs. The projected rates of job increase for miscellaneous business services and for personnel supply services are slower than the 1986–96 rates. For computer and data processing services, the projected employment growth rate basically continues the 1986–96 rate. As can be seen in table 3, computer and data processing services is the fastest growing industry in terms of employment. Personnel supply services is sixth and miscellaneous business services is eighteenth among the 20 fastest growing industries. In terms of the *level* of employment change, as shown in table 6, these three industries all are among the top 10. Personnel supply services is ranked first for added jobs, computer and data processing services ranks fourth, and miscellaneous business services ranks tenth.

The importance of the computer and data processing services industry can additionally be realized from its real output growth ranking. As can be seen from table 5, this industry is one of the fastest growing in terms of real output, with a projected growth rate of 9.3 percent annually. (In fact, it is second only to the computer and office equipment manufacturing industry.) This projected growth rate is only slightly less than the 9.7-percent average annual rate of increase posted during the 1986–96 period.

Social services. Employment for the social services industry group increased by 1 million over the 1986–96 period, posting a 5.5-percent annual rate of growth. The projected 1996–2006 employment increase of 1.1 million results in a total of 3.5 million jobs in social services. More than a third of the projected job gains (398,000) are in the *residential care* industry. This industry includes institutions that provide full-time assistance to older persons and others who do not require full-time nursing but do require assisted living arrangements. The projected increase in the older population is a driving factor in the employment growth of this industry. The *child care*[9] industry is expected to add 164,000 jobs, while *individual and miscellaneous social services* has a projected increase of 420,000 jobs. The remaining industry in social services—*job training and related services*—is projected to add 76,000 jobs. With the exception of this last industry, the detailed industries of the social services industry group are among the fastest growing industries in terms of employment. (See table 3.)

Transportation. The *transportation* sector is projected to have 4.7 million jobs in 2006, an increase of 691,000 from the 1996 level of 4 million. During the 1986–96 period, transportation eimployment grew by just under 1 million jobs, of which the *trucking and warehousing* industry accounted for 247,000. During the projection period, trucking and warehousing employment is expected to increase by another 219,000 jobs, rising from 1.6 million in 1996 to 1.9 million in 2006, at an average annual rate of 1.3 percent. Over the 1986–96 period, employment for trucking and warehousing grew at an average annual rate of 1.6 percent, while output[10] grew at an annual rate of 4.6 percent, indicating strong gains in productivity.[11] The projected annual average growth rate for trucking and warehousing output is 2.8 percent through 2006.

During the 1986–96 period, the *air transportation* industry gained 556,000 jobs, at an average annual growth rate of 7.1 percent. Employment in the industry almost doubled, rising from 566,000 to 1.1 million. Over the 1996–2006 projections period, employment growth in air transportation is expected to slow to a rate of 2.2 percent, adding 279,000 jobs.

Communications. Since 1982, the communications industry group has been characterized by flat employment overall, but a declining share of employment for the telecommunications component. Telecommunications jobs accounted for 1.1 million of the 1.4 million peak in communications employment in 1982. Since then, telecommunications employment

Table 4. Employment and output by industry, 1986, 1996, and projected 2006

Standard Industrial Classification	Industry title	Employment							Output				
		Thousands of jobs			Change		Average annual rate of growth (percent)		Billions of chained (1992) dollars			Average annual rate of growth (percent)	
		1986	1996	2006	1986–1996	1996–2006	1986–1996	1996–2006	1986	1996	2006	1986–1996	1996–2006
...	Nonfarm wage and salary[1] ...	98,727	118,731	136,318	20,004	17,587	1.9	1.4	9,167	11,789	15,252	2.5	2.6
10–14	Mining ...	78	574	443	–204	–131	–3.0	–2.5	148	140	137	–.5	–.2
10	Metal mining ...	41	54	45	13	–9	2.8	–1.8	7	10	12	3.6	
12	Coal mining ...	177	96	52	–81	–44	–5.9	–6.0	23	26	29	1.2	1.1
131, 132	Crude petroleum, natural gas, and gas liquids ...	224	148	102	–76	–47	–4.1	–3.7	88	74	65	–1.7	–1.3
138	Oil and gas field services ...	226	169	146	–57	–23	–2.9	–1.5	17	13	14	–2.1	.0
14	Nonmetallic minerals, except fuels ...	110	106	99	–3	–7	–.3	–.7	13	16	18	2.1	.8
15, 16, 17	Construction ...	4,810	5,400	5,900	590	500	1.2	.9	622	608	731	–.2	1.9
20–39	Manufacturing ...	18,951	18,457	18,108	–493	–350	–.3	–.2	2,576	3,475	4,414	3.0	2.4
24, 25, 32–39	Durable manufacturing ...	11,200	10,766	10,514	–433	–252	–.4	–.2	1,307	1,909	2,561	3.9	3.0
24	Lumber and wood products ...	724	780	797	56	17	.7	.2	79	89	106	1.2	1.7
241	Logging ...	84	80	81	–4	1	–.5	.1	18	16	22	–1.4	3.2
242	Sawmills and planing mills ...	193	182	172	–11	–10	–.6	–.6	21	24	24	1.2	.1
243	Millwork, plywood, and structural members ...	252	288	304	36	16	1.3	.6	22	26	31	1.5	1.9
244, 9	Wood containers and miscellaneous wood products ...	125	141	145	16	4	1.2	.3	10	15	18	3.5	2.1
245	Wood buildings and mobile homes ...	69	89	95	19	6	2.5	.7	7	9	11	2.7	1.4
25	Furniture and fixtures ...	498	504	509	6	5	.1	.1	38	50	60	2.6	1.9
251	Household furniture ...	294	275	256	–19	–19	–.7	–.7	20	22	26	1.2	1.3
254	Partitions and fixtures ...	73	85	94	13	9	1.6	1.0	6	7	9	2.7	1.8
252, 3, 9	Office and miscellaneous furniture and fixtures ...	31	144	159	13	16	.9	1.0	13	20	25	4.3	2.5
32	Stone, clay, and glass products ...	558	541	497	–17	–43	–.3	–.8	57	71	73	2.2	.3
321–3	Glass and glass products ...	155	148	126	–7	–22	–.5	–1.6	16	20	20	2.2	.4
324	Hydraulic cement ...	17	15	–5	–3	–2.5	–1.6	4	5	5	1.2	–.0	.0
325,6,8,9	Stone, clay, and miscellaneous mineral products ...	173	164	143	–8	–21	–.5	–1.4	17	19	18	1.5	–.7
327	Concrete, gypsum, and plaster products ...		212	214	3	2	.1	.1	21	27	30	2.9	.9
33	Primary metal industries ..	752	711	633	–41	–78	–.6	–1.2	118	164	201	3.4	2.0
331	Blast furnaces and basic steel products ...	273	240	197	–33	–44	–1.3	–2.0	47	73	91	4.4	2.3
332	Iron and steel foundries ..	131	129	116	–2	–13	–.2	–1.0	11	14	15	2.4	.6
333	Primary nonferrous ...	39	39	35	1	–5	.2	–1.3	9	13	15	4.0	1.4
334	All other primary metals .	42	45	42	3	–3	.7	–.6	8	13	16	4.8	2.6
335	Nonferrous rolling and drawing ...	181	168	154	–13	–14	–.8	–.9	36	42	53	1.4	2.3
336	Nonferrous foundries ...	86	89	89	3	0	.4	.0	7	10	11	3.0	1.1
344	Fabricated metal products ...	1,422	1,448	1,378	25	–70	.2	–.5	154	195	211	2.4	.8
341	Metal cans and shipping containers ...	57	39	29	–18	–10	–3.8	–3.1	12	13	14	.5	.8
342	Cutlery, hand tools, ...	136	125	109	–11	–16	–.9	–1.3	15	18	19	1.6	1.0
343	Plumbing and nonelectric heating equipment ...	62	58	52	–5	–5	–.8	–.9	6	6	7	–.0	.8
344	Fabricated structural metal products ...	429	439	440	10	2	.2	.0	40	52	57	2.6	1.0
345	Screw machine products, bolts, rivets, etc. ...	92	101	93	9	–8	.9	–.8	9	11	11	2.7	–.0
346	Metal forgings and stampings ...	239	253	220	13	–33	.5	–1.4	29	40	40	3.1	.1

Table 4. Continued—Employment and output by industry, 1986, 1996, and projected 2006

Standard Industrial Classification	Industry title	Employment							Output				
		Thousands of jobs			Change		Average annual rate of growth (percent)		Billions of chained (1992) dollars			Average annual rate of growth (percent)	
		1986	1996	2006	1986–1996	1996–2006	1986–1996	1996–2006	1986	1996	2006	1986–1996	1996–2006
347	Metal coating, engraving, and allied services	108	133	144	25	11	2.1	.8	8	14	18	5.8	2.6
348	Ordnance and ammunition	76	48	42	–28	–6	–4.6	–1.2	8	5	5	–4.5	–.9
349	Miscellaneous fabricated metal products	222	254	248	31	–6	1.3	–.2	27	37	40	3.1	.8
35	Industrial machinery and equipment	2,074	2,112	2,087	39	–25	.2	–.1	190	396	686	7.7	5.6
351	Engines and turbines	99	84	73	–15	–11	–1.6	–1.3	17	21	26	2.1	2.2
352	Farm and garden machinery and equipment	89	99	84	10	–15	1.1	–1.6	12	20	21	5.5	.8
353	Construction and related machinery	224	232	247	8	15	.4	.6	29	39	56	2.8	3.7
354	Metalworking machinery and equipment	320	345	344	25	–1	.8	–.0	25	33	37	2.7	1.2
355	Special industry machinery	150	177	175	27	–2	1.7	–.1	17	31	34	6.6	.8
356	General industrial machinery and equipment	234	257	250	23	–7	.9	–.3	28	37	42	2.9	1.3
357	Computer and office equipment	469	363	314	–106	–49	–2.5	–1.4	26	159	636	19.7	14.9
358	Refrigeration and service industry machinery	172	205	220	33	15	1.8	.7	23	36	44	4.3	2.2
359	Industrial machinery, n.e.c.	316	349	379	33	31	1.0	.8	22	37	50	5.3	3.0
36	Electronic and other electric equipment	1,774	1,651	1,627	–122	–25	–.7	–.1	170	322	515	6.6	4.8
361	Electric distribution equipment	103	82	68	–21	–14	–2.3	–1.9	10	12	11	2.0	–.9
362	Electrical industrial apparatus	182	156	122	–26	–34	–1.5	–2.4	17	25	27	3.5	.9
363	Household appliances	133	121	96	–12	–25	–1.0	–2.2	17	22	24	2.6	1.1
364	Electric lighting and wiring equipment	198	178	161	–20	–16	–1.0	–1.0	19	22	23	1.7	.4
365	Household audio and video equipment	82	83	73	1	–10	.1	–1.3	12	15	20	2.8	2.7
366	Communications equipment	296	269	255	–26	–14	–.9	–.5	37	63	101	5.5	4.8
367	Electronic components and accessories	610	610	700	–0	90	–.0	1.4	38	141	285	14.0	7.3
369	Miscellaneous electrical equipment	170	153	151	–17	–2	–1.0	–.1	21	24	36	1.3	4.4
37	Transportation equipment	2,003	1,781	1,792	–222	11	–1.2	.1	357	446	539	2.3	1.9
371	Motor vehicles and equipment	872	963	929	91	–33	1.0	–.4	219	320	372	3.9	1.5
372,6	Aerospace	855	550	596	–305	46	–4.3	.8	113	94	120	–1.8	2.5
373	Ship and boat building and repairing	185	157	142	–29	–14	–1.7	–1.0	15	14	16	–.8	1.5
374	Railroad equipment	29	36	42	7	6	2.3	1.5	3	7	12	9.3	6.3
375, 9	Miscellaneous transportation equipment	61	75	83	14	7	2.1	.9	7	11	18	4.8	5.3
38	Instruments and related products	1,036	854	787	–182	–67	–1.9	–.8	114	138	174	2.0	2.3
381	Search and navigation equipment	349	161	110	–188	–51	–7.5	–3.8	41	28	31	–3.7	1.0
382	Measuring and controlling devices	312	297	265	–15	–32	–.5	–1.1	27	43	55	4.5	2.5
384	Medical equipment, instruments, and supplies	213	268	310	55	43	2.3	1.5	23	42	59	6.2	3.4
385	Ophthalmic goods	37	36	32	–1	–4	–.4	–1.1	2	3	5	7.7	3.3

Table 4. Continued—Employment and output by industry, 1986, 1996, and projected 2006

Standard Industrial Classification	Industry title	Employment							Output				
		Thousands of jobs			Change		Average annual rate of growth (percent)		Billions of chained (1992) dollars			Average annual rate of growth (percent)	
		1986	1996	2006	1986–1996	1996–2006	1986–1996	1996–2006	1986	1996	2006	1986–1996	1996–2006
386	Photographic equipment and supplies	114	85	65	–30	–20	–2.9	–2.6	19	22	25	1.1	1.4
387	Watches, clocks, and parts	11	8	5	–3	–3	–3.5	–4.0	1	1	1	–5.6	–1.0
39	Miscellaneous manufacturing industries	361	387	408	26	22	.7	.5	33	47	55	3.6	1.7
391	Jewelry, silverware, and plated ware	54	49	46	–5	–3	–1.0	–.7	6	6	5	1.1	–2.0
394	Toys and sporting goods	93	114	134	21	21	2.0	1.7	9	14	20	4.9	3.4
393, 5, 6, 9	Manufactured products, n.e.c.	214	224	228	10	4	.5	.2	18	26	30	3.6	1.5
20–23, 26–31	Nondurable manufacturing	7,751	7,691	7,593	–60	–98	–.1	–.1	1,270	1,566	1,865	2.1	1.8
20	Food and kindred products	1,605	1,693	1,713	88	21	.5	.1	339	416	472	2.1	1.3
201	Meat products	372	481	551	110	70	2.6	1.4	71	92	111	2.7	1.9
202	Dairy products	162	144	134	–18	–10	–1.2	–.7	44	49	53	.9	.8
203	Preserved fruits and vegetables	225	237	237	13	–	.6	–	39	48	57	2.1	1.7
204, 7	Grain mill products a and fats and oils	157	158	157	1	–1	.1	–.1	56	73	82	2.8	1.1
205	Bakery products	215	210	192	–5	–18	–.2	–.9	27	27	30	.2	.8
206	Sugar and confectionery products	98	99	95	0	–4	.0	–.4	20	23	25	1.5	.9
208	Beverages	209	179	149	–31	–29	–1.6	–1.8	56	71	79	2.3	1.1
209	Miscellaneous food and kindred products	167	185	199	19	13	1.1	.7	27	33	36	2.1	.9
21	Tobacco products	59	41	30	–17	–11	–3.4	–3.1	43	47	35	.7	–2.9
22	Textile mill products	703	624	588	–79	–36	–1.2	–.6	61	74	90	2.0	1.9
221–4, 6, 8	Weaving, finishing, yarn, and thread mills	387	332	301	–55	–31	–1.5	–1.0	32	38	45	1.5	1.7
225	Knitting mills	210	180	165	–31	–15	–1.6	–.8	14	18	22	2.7	2.0
227	Carpets and rugs	55	61	76	6	14	1.0	2.1	9	10	13	1.1	2.4
229	Miscellaneous textile goods	51	51	47	0	–5	.1	–1.0	6	9	10	3.8	1.7
23	Apparel and other textile products	1,100	864	714	–236	–150	–2.4	–1.9	69	78	81	1.2	.4
231–8	Apparel	916	643	475	–273	–168	–3.5	–3.0	53	53	51	.1	–.5
239	Miscellaneous fabricated textile products	184	221	239	37	18	1.9	.8	16	24	30	4.1	2.1
26	Paper and allied products	667	681	702	14	21	.2	.3	118	140	174	1.7	2.2
261–3	Pulp, paper, and paperboard mills	242	223	210	–19	–13	–.8	–.6	48	59	72	2.0	2.1
265	Paperboard containers and boxes	197	217	242	21	25	1.0	1.1	28	32	43	1.5	3.0
267	Converted paper products except containers	229	240	250	12	10	.5	.4	42	49	59	1.5	1.8
27	Printing and publishing	1,456	1,538	1,501	82	–37	.5	–.2	154	170	195	1.0	1.4
271	Newspapers	460	442	395	–18	–47	–.4	–1.1	42	32	30	–2.8	–.5
272	Periodicals	115	132	140	17	9	1.4	.6	22	22	21	–.1	–.2
273	Books	109	124	130	16	5	1.4	.4	19	24	30	2.4	2.3
274	Miscellaneous publishing	71	86	83	15	–3	2.0	–.3	6	11	13	5.4	1.5
275, 6	Commercial printing and business forms	551	609	610	58	1	1.0	.0	53	68	86	2.6	2.4
277	Greeting cards	23	27	30	4	3	1.5	1.0	3	4	4	1.7	.4
278	Blankbooks and bookbinding	72	66	69	–6	2	–.9	.4	5	5	5	.9	–.3
279	Service industries for the printing trade	56	52	45	–4	–7	–.8	–1.4	5	5	6	.6	2.9
28	Chemicals and allied products	1,021	1,032	1,070	11	38	.1	.4	258	325	387	2.4	1.8
281, 6	Industrial chemicals	290	263	261	–27	–2	–1.0	–.1	87	89	102	.2	1.4
282	Plastics materials and synthetics	168	159	145	–9	–14	–.5	–.9	40	57	64	3.6	1.1
283	Drugs	208	259	319	51	61	2.2	2.1	49	74	98	4.2	2.9

Table 4. Continued—Employment and output by industry, 1986, 1996, and projected 2006

Standard Industrial Classification	Industry title	Employment							Output				
		Thousands of jobs			Change		Average annual rate of growth (percent)		Billions of chained (1992) dollars			Average annual rate of growth (percent)	
		1986	1996	2006	1986–1996	1996–2006	1986–1996	1996–2006	1986	1996	2006	1986–1996	1996–2006
284	Soap, cleaners, and toilet goods	146	154	157	8	3	.5	.2	36	49	56	3.3	1.3
285	Paint and allied products	63	53	52	–10	–1	–1.8	–.2	14	16	19	1.1	2.3
287	Agricultural chemicals	54	52	52	–2	–0	–.3	–.0	13	19	24	3.3	2.5
289	Miscellaneous chemical products	93	93	84	–1	–9	–1.0	–1.0	18	22	24	22	.9
29	Petroleum and coal products	169	142	118	–27	–23	–1.7	–1.8	137	171	222	2.2	2.7
291	Petroleum refining	131	100	80	–31	–21	–2.7	–2.3	125	156	204	2.3	2.8
295, 9	Miscellaneous petroleum and coal products	38	42	39	4	–3	.9	–.7	12	15	17	2.1	1.6
30	Rubber and miscellaneous plastics products	822	981	1,091	159	110	1.8	1.1	85	140	201	5.1	3.7
301	Tires and inner tubes	88	80	59	–9	–20	–1.0	–2.9	11	15	15	2.9	.4
302, 5, 6	Rubber products and plastic hose and footwear	171	188	176	16	–11	.9	–.6	15	21	25	3.5	1.7
308	Miscellaneous plastics products, n.e.c.	563	714	855	151	141	2.4	1.8	59	104	160	5.8	4.5
31	Leather and leather products	149	96	65	–53	–31	–4.3	–3.8	9	8	7	–1.8	–1.0
313, 4	Footwear, except rubber and plastic	95	47	31	–48	–16	–6.8	–4.0	5	3	2	–4.0	–3.3
311, 5–7, 9	Luggage, handbags, and leather products, n.e.c.	54	49	34	–5	–15	–1.0	–3.6	4	4	4	.2	.4
40–42, 44–49	Transportation, communications, utilities	5,247	6,260	7,111	1,014	851	1.8	1.3	765	983	1,336	2.5	3.1
40–42, 44–47	Transportation	3,051	4,038	4,774	987	736	2.8	1.7	306	450	594	3.9	2.8
40	Railroad transportation	332	231	202	–100	–29	–3.5	–1.3	32	38	50	1.5	2.9
41	Local and interurban passenger transit	286	439	527	153	88	4.4	1.8	14	11	16	–2.3	4.1
42	Trucking and warehousing	1,394	1,641	1,860	247	219	1.6	1.3	124	194	255	4.6	2.8
44	Water transportation	174	173	167	–1	–6	–.1	–.4	29	35	47	1.8	3.0
45	Air transportation	566	1,122	1,401	556	279	7.1	2.2	76	130	169	5.6	2.7
46	Pipelines, except natural gas	18	15	13	–4	–2	–2.2	–1.5	8	10	9	1.9	–.7
47	Transportation services	281	417	605	136	187	4.0	3.8	24	34	49	3.3	3.7
472	Passenger transportation arrangement	157	213	277	56	64	3.1	2.7	9	14	21	4.3	3.8
473, 4, 8	Miscellaneous transportation services	124	204	327	81	123	5.1	4.8	15	19	28	2.6	3.6
48	Communications	1,275	1,337	1,360	63	23	.5	.2	214	302	422	3.5	3.4
49	Electric, gas, and sanitary services	921	885	976	–37	91	–.4	1.0	244	230	319	–.6	3.3
491, pt. 493	Electric utilities	579	474	472	–105	–2	–2.0	–.0	153	151	229	–.1	4.3
492, pt. 493	Gas utilities	216	180	155	–35	–25	–1.8	–1.5	76	60	68	–2.3	1.2
494–7, pt. 493	Water and sanitation	127	231	349	104	118	6.2	4.2	16	18	22	1.7	1.9
50, 51	Wholesale trade	5,751	6,483	7,228	732	745	1.2	1.1	494	750	1,091	4.3	3.8
52–591	Retail trade	17,878	21,625	23,875	3,747	2,250	1.9	1.0	713	977	1,237	3.2	2.4
52-57, 59	Retail trade, excluding eating and drinking places	11,976	14,126	14,991	2,149	866	1.7	.6	513	723	923	3.5	2.5
58	Eating and drinking places	5,902	7,499	8,884	1,598	1,384	2.4	1.7	200	254	315	2.4	2.2
60–67	Finance, insurance, and real estate	6,275	6,899	7,651	625	752	1.0	1.0	1,051	1,209	1,553	1.4	2.5
60	Depository institutions	2,219	2,024	1,950	–196	–74	–.9	–.4	294	279	358	–.5	2.5
61, 67	Nondepository; holding and investment offices	531	726	928	194	203	3.2	2.5	36	44	57	2.2	2.5
62	Security and commodity brokers	396	551	740	156	189	3.4	3.0	50	125	215	9.5	5.6
63	Insurance carriers	1,365	1,510	1,694	145	184	1.0	1.2	184	213	266	1.5	2.3

Table 4. Continued—Employment and output by industry, 1986, 1996, and projected 2006

Standard Industrial Classification	Industry title	Employment							Output				
		Thousands of jobs			Change		Average annual rate of growth (percent)		Billions of chained (1992) dollars			Average annual rate of growth (percent)	
		1986	1996	2006	1986–1996	1996–2006	1986–1996	1996–2006	1986	1996	2006	1986–1996	1996–2006
63	Insurance carriers	1,365	1,510	1,694	145	184	1.0	1.2	184	213	266	1.5	2.3
64	Insurance agents, brokers, and service	579	707	777	128	70	2.0	.9	79	50	63	–4.5	2.3
65	Real estate	1,184	1,381	1,561	198	180	1.6	1.2	414	508	623	2.1	2.1
...	Royalties	–	–	–	–	–	–	–	38	66	76	5.6	1.4
...	Owner-occupied dwellings	–	–	–	–	–	–	–	387	490	565	2.4	1.4
70–87, 89	Services[1]	22,346	33,586	44,852	11,240	11,266	4.2	2.9	1,510	2,185	3,101	3.8	3.6
70	Hotels and other lodging places	1,378	1,716	1,978	338	262	2.2	1.4	85	94	97	1.0	.3
72	Personal services	1,008	1,184	1,294	176	110	1.6	.9	55	66	81	1.8	2.0
721, 5	Laundry, cleaning, and shoe repair	392	439	460	48	21	1.2	.5	18	22	27	2.2	2.0
722, 9	Personal services, n.e.c.	173	238	273	65	34	3.2	1.4	16	19	24	2.2	1.9
723, 4	Beauty and barber shops	367	412	462	45	51	1.2	1.2	15	19	23	2.0	2.0
726	Funeral service and crematories	76	95	99	19	4	2.2	.4	7	6	8	–.7	2.3
73	Business services	3,931	7,254	10,835	3,324	3,581	6.3	4.1	220	425	775	6.8	6.2
731	Advertising	204	242	270	39	28	1.7	1.1	16	21	28	2.3	3.2
734	Services to buildings	685	897	1,097	212	200	2.7	2.0	20	29	42	4.0	3.6
735	Miscellaneous equipment rental and leasing	156	238	320	82	82	4.3	3.0	20	27	34	2.9	2.5
737	Computer and data processing services	588	1,208	2,509	620	1,301	7.5	7.6	66	166	403	9.7	9.3
732, 3, 8	Miscellaneous business services	1,308	2,023	2,599	715	577	4.5	2.5	77	126	175	5.1	3.4
75	Auto repair, services, and garages	762	1,084	1,482	322	399	3.6	3.2	112	180	336	4.8	6.5
751	Automotive rentals, without drivers	157	193	246	36	53	2.1	2.4	55	108	239	7.0	8.3
752–4	Automobile parking, repair, and services	604	890	1,236	286	346	4.0	3.3	57	72	91	2.3	2.3
76	Miscellaneous repair shops	322	375	425	53	51	1.5	1.3	31	32	40	.3	2.1
762	Electrical repair shops	103	114	128	11	14	1.1	1.2	8	11	13	3.0	1.4
763, 4	Watch, jewelry, and furniture repair	29	27	26	–2	–1	–.6	–.4	2	3	3	2.5	1.7
769	Miscellaneous repair services	190	233	271	43	38	2.1	1.5	20	18	24	–1.1	2.5
78	Motion pictures	320	522	628	202	106	5.0	1.9	35	60	86	5.5	3.6
781–3	Motion pictures	227	368	455	141	87	5.0	2.2	33	54	77	5.1	3.6
784	Video tape rental	94	155	173	61	18	5.1	1.1	3	7	9	9.6	3.0
79	Amusement and recreation services	895	1,466	1,998	571	532	5.1	3.1	61	92	125	4.3	3.1
792	Producers, orchestras, and entertainers	110	152	205	42	53	3.3	3.0	13	19	29	3.6	4.5
793	Bowling centers	92	82	73	–10	–9	–1.1	–1.1	3	2	2	–3.1	–1.6
794	Commercial sports	81	124	155	42	31	4.3	2.3	9	9	8	–.3	–.7
791, 9	Amusement and recreation services, n.e.c.	612	1,109	1,565	497	457	6.1	3.5	35	62	86	5.9	3.3
80	Health services	6,528	9,469	12,620	2,941	3,151	3.8	2.9	432	587	727	3.1	2.2
801–4	Offices of health practitioners	1,752	2,751	4,046	1,000	1,295	4.6	3.9	182	231	287	2.4	2.2
805	Nursing and personal care facilities	1,245	1,732	2,377	488	645	3.4	3.2	37	59	84	5.0	3.6
806	Hospitals, private	3,037	3,814	4,229	776	416	2.3	1.0	178	232	274	2.7	1.7
807–9	Health services, n.e.c.	494	1,172	1,968	678	796	9.0	5.3	35	65	81	6.4	2.3
81	Legal services	747	930	1,187	183	257	2.2	2.5	95	99	138	.4	3.4
82	Educational services	1,421	2,020	2,478	599	458	3.6	2.1	64	85	98	2.9	1.5
83	Social services	1,406	2,403	3,461	997	1,058	5.5	3.7	53	76	109	3.7	3.7
832, 9	Individual and miscellaneous social services	522	846	1,266	324	420	5.0	4.1	19	31	45	4.8	4.1
833	Job training and related services	241	315	392	74	76	2.7	2.2	8	11	13	3.2	1.7
835	Child day care services	322	569	734	247	164	5.9	2.6	15	18	28	1.6	4.6

Table 4. Continued—Employment and output by industry, 1986, 1996, and projected 2006

Standard Industrial Classification	Industry title	Employment							Output				
		Thousands of jobs			Change		Average annual rate of growth		Billions of chained (1992) dollars			Average annual rate of growth	
		1986	1996	2006	1986–1996	1996–2006	1986–1996	1996–2006	1986	1996	2006	1986–1996	1996–2006
84	Museums, botanical, zoological gardens	52	85	109	33	24	5.0	2.5	2	3	4	5.5	3.5
86	Membership organizations	1,536	2,185	2,428	649	243	3.6	1.1	65	82	101	2.3	2.2
87, 89	Engineering, management, and related services	2,042	2,893	3,930	852	1,036	3.5	3.1	202	307	392	4.3	2.5
871	Engineering and architectural services	681	839	1,052	158	213	2.1	2.3	70	91	119	2.6	2.7
873	Research and testing services	456	569	726	112	158	2.2	2.5	28	56	84	7.3	4.1
874	Management and public relations	445	873	1,400	428	527	7.0	4.8	54	106	136	7.1	2.5
872, 89	Accounting, auditing, and other services	459	613	752	153	139	2.9	2.1	51	57	60	1.1	.6
...	Government	16,693	19,447	21,150	2,754	1,703	1.5	.8	831	923	1,029	1.1	1.1
...	Federal Government	2,899	2,757	2,670	−142	−87	−.5	−.3	324	308	305	−.5	−.1
...	Federal enterprises	991	1,017	1,070	26	53	.3	.5	58	70	87	1.9	2.2
...	U.S. Postal Service	789	856	880	67	24	.8	.3	43	53	69	2.1	2.7
...	Federal electric utilities	33	26	25	7	−1	−2.3	−.5	8	9	10	1.6	1.6
...	Federal Government enterprises, n.e.c.	168	135	165	−34	30	−2.2	2.1	8	9	8	1.4	−.8
...	Federal general government	1,908	1,740	1,600	−168	−140	−.9	−.8	266	238	220	−1.1	−.8
...	Federal Government capital services	–	–	–	–	–	–	–	53	61	56	1.4	−.8
...	State and local government	13,794	16,690	18,480	2,896	1,790	1.9	1.0	507	616	724	2.0	1.6
...	State and local enterprises	850	895	802	45	−93	.5	−1.1	84	103	121	2.0	1.6
...	Local government passenger transit	195	211	212	16	1	.8	.0	6	5	6	−.8	1.4
...	State and local electric utilities	80	85	100	5	15	.7	1.6	17	24	30	3.2	2.4
...	State and local government enterprises, n.e.c.	575	598	490	23	−108	.4	−2.0	61	73	85	1.8	1.4
...	State and local general government	12,944	15,795	17,678	2,851	1,883	2.0	1.1	423	513	603	2.0	1.6
...	State and local government hospitals	1,039	1,038	1,017	−2	−21	−.0	−.2	33	38	44	1.5	1.5
...	State and local government education	7,045	8,671	10,002	1,626	1,331	2.1	1.4	212	245	284	1.5	1.5
...	State and local general government, n.e.c.	4,859	6,086	6,658	1,227	573	2.3	.9	141	177	205	2.3	1.5
..	State and local government capital services	–	–	–	–	–	–	–	37	53	70	3.7	2.8
01,02,07,08,09	Agriculture [1,2]	3,327	3,642	3,618	314	−34	.9	−.1	215	261	304	2.0	1.5
01, 02	Agricultural production	2,382	2,235	1,982	−147	−253	−.6	−1.2	186	224	263	1.8	1.6
07	Agricultural services	835	1,326	1,565	490	240	4.7	1.7	23	28	31	2.0	.9
08, 09	Forestry, fishing, hunting, and trapping	110	81	71	−29	−10	−3.0	−1.4	6	9	11	4.3	1.5
88	Private household wage and salary	1,235	928	775	−307	−153	−2.8	−1.8	9	10	10	1.5	.7
...	Nonagricultural self-employed and unpaid family [3,4]	8,085	9,051	10,216	966	1,165	1.1	1.2	–	–	–	–	–
...	Total [5,6]	111,374	132,352	150,927	20,978	18,575	1.7	1.3	9,391	12,060	15,568	2.5	2.6

[1] Excludes SIC 074,5,8 (agricultural services) and 99 (nonclassifiable establishments). The data therefore are not exactly comparable with data published in *Employment and Earnings*.

[2] Excludes government wage and salary workers, and includes private SIC 08, 09 (forestry and fisheries).

[3] Excludes SIC 08, 09 (forestry and fisheries).

[4] Comparable estimate of output growth is not available.

[5] Wage and salary data are from the Current Employment Statistics (payroll) survey, which counts jobs, whereas self-employed, unpaid family worker, agricultural, and private household data are from the Current Po-pulation Survey (household survey), which counts workers. These totals for 1986 and 1996, therefore, differ from the official employment estimates of the Bureau of Labor Statistics.

[6] Subcategories do not necessarily add to higher categories as a byproduct of chain-weighting.

NOTE: Dash indicates data not available. n.e.c. = not elsewhere classified.

SOURCE: Historical output data are from the Bureau of Economic Analysis, U.S. Department of Commerce.

has gradually declined from 1.1 million in 1982 to the 1996 level of 879,700, while overall employment for communications has declined slightly, to 1.3 million. During the 1982–96 period, real output for communications increased at an average annual rate of 2.9 percent, which, when combined with the flat employment growth, indicates strong productivity gains.

During the development of the Bureau's previous set of projections, which covered the period 1994 to 2005, the future of this industry group was very uncertain in the face of deregulation, rapid technological change, and efforts by businesses to develop new markets. Over the last 2 years, the future of the communications market has not become any clearer. Three factors remain key to the Bureau's projections for this group: communications is the lifeblood of the information age and the commerce built during this era; the capital equipment of the communications industry is built around the microprocessor and electronic components; and, finally, the application of the electronic capital equipment has resulted in high rates of productivity growth historically. Within this context, the projected output of the communications industry has a strong annual average growth rate of 3.4 percent during the 1996–2006 period. With the expectation of continued productivity growth, employment is projected to increase slightly, by 23,000, from the 1996 level of 1.4 million.

Wholesale and retail trade. Both *wholesale trade* and *retail trade*—except *eating and drinking places*—are expected to have healthy productivity increases stemming from applications of inventory control and computerized order systems, and from restructuring of sales work forces. Wholesale trade is projected to add 745,000 jobs to its 1996 level of 6.5 million to reach 7.2 million by 2006. During the 1986–96 period, wholesale trade gained 732,000 jobs. The real output for wholesale trade is projected to grow at annual average rate of 3.8 percent, outpacing the growth of the economy as a whole. By contrast, employment is projected to expand at an annual rate of 1.1 percent. Jobs in retail trade, excluding eating and drinking places, are projected to increase by 865,000 from the 1996 level of 14.1 million to a 2006 level of 15.0 million. The projected job growth is significantly less than the increase of 2.2 million posted during the 1986–96 period. On an annual average basis, the projected employment growth rate is 0.6 percent. Output for retail trade is projected to increase at an annual average rate of 2.5 percent.

Real output for eating and drinking places is projected to grow at an average rate of 2.2 percent per year between 1996 and 2006, a slower pace than the 1986–96 growth rate of 2.4 percent. The expected slowdown is due to a wider availability of prepared food from grocery specialty stores, and to slower growth in the fast food sector as the population ages. Productivity gains also will contribute to the slower employment growth rate of 1.7 percent annually, which translates into a job gain of 1.4 million over the 1996–2006 projection period. By comparison, employment grew by 1.6 million jobs, or at a 2.4-percent rate, over the 1986–96 period.

Finance, insurance, and real estate. Depository institutions,[12] which include banks, credit unions, and savings and loans, are expected to have high rates of productivity growth through the projection period. It also is expected that the mergers and consolidations that have characterized the industry in recent years will continue, resulting in employment loss as unprofitable branches are closed and operations are combined and centralized. Additionally, banks will continue to expand the use of automatic tellers and other computerized means of providing services to customers, instead of hiring additional employees. The real output of depository institutions has a projected annual growth rate of 2.5 percent, while employment is projected to decline at an annual rate of 0.4 percent. This loss of 74,000 jobs ranks the industry sixth among those with the largest job declines from 1996 to 2006. (See table 6.)

The *security and commodity brokers* industry has higher-than-average projected rates of growth for both real output (5.6 percent) and employment (3.0 percent). In fact, the securities industry is the sixth-fastest growing in terms of real output. Its projected rate of output growth, however, represents a slowing from the 9.5-percent rate of increase posted over the 1986–96 period. Similarly, the projected 3.0-percent rate of employment growth is slower than the 3.4-percent rate recorded during 1986–96. The gain in jobs for the security and commodity brokers industry is an expected 189,000, raising total employment from 551,000 in 1996 to 740,000 in 2006.

Employment for *insurance carriers* is projected to increase by 184,000 to 1.7 million in 2006. Output is expected to grow at an annual rate of 2.3 percent, a little slower than the 2.6-percent rate for the total economy. Employment in the *insurance agents, brokers, and services* industry is projected to increase from 707,000 to 777,000, for a gain of 70,000. The industry's output is projected to grow at a rate of 2.3 percent.

Employment in the *real estate* industry is projected to increase from 1.4 million in 1996 to 1.6 million in 2006, or by a 1.2-percent annual rate. This is a slight slowing of job growth in comparison to the 1986–96 period, during which employment expanded at a 1.6-percent annual rate. Output is projected to grow by 2.1 percent per year, a continuation of the pace observed during the 1986–96 period. A variety of computer information applications, such as internet-accessible multiple listing services used to help clients screen real estate, will allow productivity increases for the real estate industry.

Government. Employment in the public sector is projected to increase by 1.7 million over its 1996 level of 19.4 million

through 2006. This reflects an annual growth rate of 0.8 percent, slower than the total nonfarm wage and salary increase of 1.4 percent. Federal Government employment is projected to decline by 87,000 as downsizing continues in the Federal sector. In 1996, employment in the Federal sector was slightly less than 2.8 million, and is projected to decline to just under 2.7 million by 2006.

State and local government employment is projected to increase from the 1996 level of 16.7 million to 18.5 million by 2006. Of the 1.8 million jobs added in State and local employment, 1.3 million are in State and local education[13] as a consequence of the growth in the school-age population. As the following tabulation shows, the elementary school population (aged 5 to 13) is expected to rise by 1.1 million between 1996 and 2006. The secondary school population (aged 14 to 17) has a projected increase of 2.0 million, and the postsecondary school population (aged 18 to 24) expands by 3.6 million.[14]

	Population (in millions)		
Year	*Aged 5–13*	*Aged 14–17*	*Aged 18–24*
1970	36.7	15.9	24.5
1975	33.9	17.1	28.0
1980	31.2	16.2	30.0
1985	30.0	14.9	28.9
1990	31.8	13.3	27.0
1994	33.9	14.4	25.3
1995	34.1	14.8	25.2
1996	34.6	15.2	24.9
Projected, 2006	35.7	17.2	28.5

Goods-producing industries

Mining. The projected 131,000 decline in wage and salary employment in the mining division is a continuation of a long-term trend. The mining industries are suppliers of raw material and energy to other sectors of the economy. As such, the mining division is subject to international competition and global price pressures. These influences, combined with productivity increases, are the principal factors behind the employment decline.

About 55 percent of mining employment in 1996 was accounted for by the *crude petroleum, natural gas, and gas liquids* industry and the *oil and gas field services* industry. The combined employment decline for these industries will account for more than half of the decrease (70,000) for all mining employment. Productivity gains are expected in both industries, but increased reliance on foreign oil and decreased production of domestic crude are the principal factors in the projected decline for the crude petroleum mining industries.

The *coal mining* industry has a projected loss of 44,000 wage and salary jobs, but productivity increases will allow growth in coal production. Although coal mining output has been relatively flat since 1990, growth is expected over the projection period as coal is expected to remain the principal fuel source for electrical energy production.[15]

The *metal mining* industry is projected to contract by 14,000 jobs, a 25-percent decline from its 1996 level of 54,000. The *nonmetallic minerals mining* industry has a projected decrease of 7,000 jobs from its 106,000 total in 1996. Productivity gains for both of these industries should result in annual average output growth rates of 4.2 percent for metal mining and 0.8 percent for nonmetallic minerals mining.

Construction. The construction industry is projected to gain 300,000 jobs over the 1996–2006 period, the result of annual average growth of 0.5 percent. Since the late 1980s, wage and salary employment in construction has hovered around 5 million, except during the recession in the early 1990s. Employment bottomed out at 4.5 million in 1992, but by 1996, it had recouped its losses and stood at 5.4 million. Construction output, led by public investment in new construction and in the maintenance and rebuilding of roads, bridges, and other public structures, is expected to grow, but at a slower rate than output of the aggregate economy, 2.3 percent versus 2.6 percent. Growth in residential construction will be moderated by slowing population growth from 1996 to 2006. Fixed residential investment is expected to show annual growth of 0.9 percent through 2006, whereas investment in nonresidential construction has a stronger growth rate, 1.5 percent.[16]

Manufacturing. The outlook for manufacturing remains one of strong output and productivity growth, but also one of employment declines. Such a pattern is expected for two-thirds, or 63 out of 96, of the detailed manufacturing industries for which projections were developed. Through the 1996–2006 period, real output for manufacturing is projected to increase at an annual average rate of 2.4 percent. Wage and salary employment in manufacturing has a projected loss of 350,000 jobs, declining at a annual average rate of 0.2 percent. Output grew at an annual rate of 3.0 percent during the previous 10-year period, while employment fell at a 0.3-percent annual rate, for a loss of 493,000 wage and salary jobs. Strong demand for durable goods by consumers, businesses, and the export market is expected to drive the growth in manufacturing output.

Durable goods. Output for the durable goods sector of manufacturing has projected growth of 3.0 percent, on an annual average basis, from 1996 through 2006. Employment, however, is expected to decline because of productivity gains. Historically, the durable goods manufacturing sector has enjoyed strong productivity gains, and this is expected to con-

tinue. During the 1986–1996 period, durable goods manufacturing lost 433,000 jobs, despite a 3.9-percent annual average growth rate for output. Because of expected productivity gains, the number of jobs in durable manufacturing is projected to decline by 252,000 jobs.

Output growth for durable goods manufacturing is driven by consumer, business, and foreign purchases of durable equipment. Many of these purchases involve computers and other office equipment. Personal consumption of durable goods is projected to grow at an annual rate of 3.2 percent from 1996 to 2006.[17] Investment in producers' durable equipment is projected to increase at an even faster rate, 4.8 percent. Because of the expected strong demand by both consumers and businesses, output growth for the durable goods manufacturing sector is much faster than the overall growth of the aggregate economy.

With computer purchases playing such a dominant role in demand for durable goods, it is not surprising that output growth rates for *industrial machinery and equipment* (5.1 percent) and for *electronic and other electric equipment* (4.3 percent) are the fastest among those for two-digit SIC industry groups. The two industry groups within durable manufacturing with the next highest rates of output growth are *primary metal industries* (2.5 percent) and *instruments and related products* (2.1 percent). Declining employment is projected for all four of these industry groups, a continuation of the 1986–

Table 5. Industries with fastest and slowest output growth, 1996–2006

Standard Industrial Classification	Industry description	Billions of chained (1992) dollars		Change	Annual rate of change
		1996	2006	1996–2006	1996–2006
	Fastest growing				
357	Computer and office equipment	158.8	635.6	476.8	14.9
737	Computer and data processing services	165.9	403.4	237.5	9.3
751	Automotive rentals, without drivers	107.7	238.7	131.0	8.3
367	Electronic components and accessories	140.8	285.3	144.4	7.3
374	Railroad equipment	6.6	12.2	5.5	6.3
62	Security and commodity brokers	124.7	215.3	90.6	5.6
736	Personnel supply services	57.2	97.5	40.4	5.5
375, 379	Miscellaneous transportation equipment	10.6	17.8	7.2	5.3
366	Communications equipment	63.1	101.0	37.9	4.8
835	Child day care services	17.7	27.8	10.1	4.6
308	Miscellaneous plastics products, n.e.c.	103.6	160.3	56.6	4.5
792	Producers, orchestras, and entertainers	19.0	29.4	10.4	4.5
369	Miscellaneous electrical equipment	23.8	36.4	12.6	4.4
491, pt. 493	Electric utilities	150.9	228.8	77.9	4.3
41	Local and interurban passenger transit	10.7	16.1	5.3	4.1
873	Research and testing services	56.1	83.8	27.7	4.1
832, 839	Individual and Individual and miscellaneous social services	30.5	45.5	14.9	4.1
472	Passenger transportation arrangement	14.3	20.8	6.5	3.8
50, 51	Wholesale trade	749.7	1,090.9	341.2	3.8
353	Construction and related machinery	39.0	55.9	16.9	3.7
	Most rapidly declining				
313, 314	Footwear, except rubber and plastic	3.3	2.4	–1.0	–3.3
21	Tobacco products	46.8	34.7	–12.0	–2.9
391	Jewelry, silverware, and plated ware	6.5	5.3	–1.2	–2.0
793	Bowling centers	2.3	2.0	–.4	–1.6
131, 132	Crude petroleum, natural gas, and gas liquids	74.0	65.0	–9.0	–1.3
387	Watches, clocks, and parts	.7	.6	–.1	–1.0
348	Ordnance and ammunition	5.0	4.5	–.4	–.9
361	Electric distribution equipment	11.9	10.9	–1.0	–.9
...	Federal Government capital services	61.3	56.4	–4.9	–.8
...	Federal Government enterprises, n.e.c.	8.9	8.2	–.7	–.8
...	Federal General government	176.7	163.7	–13.0	–.8
46	Pipelines, except natural gas	9.6	8.9	–.7	–.7
325, 326, 328, 329	Stone, clay, and miscellaneous mineral products	19.3	18.0	–1.4	–.7
794	Commercial sports	9.0	8.4	–.6	–.7
881	Private households	.4	9.7	–.7	–.7
231–238	Apparel	53.3	50.8	–2.6	–.5
271	Newspapers	31.9	30.4	–1.4	–.5
278	Blankbooks and bookbinding	5.2	5.0	–.2	–.3
272	Periodicals	21.6	21.2	–.4	–.2
345	Screw machine products, bolts, rivets, etc.	11.3	11.2	.0	.0

NOTE: n.e.c. = not elsewhere classified.

Table 6. Industries with the largest wage and salary employment growth and declines, 1996–2006

Standard Industrial Classification	Industry description	Thousands of jobs		Change	Average annual rate of change (percent)
		1996	2006	1996–2006	1996–2006
	Largest growth				
736	Personnel supply services	2,646.0	4,039.3	1,393.3	4.3
58	Eating and drinking places	7,499.4	8,883.5	1,384.1	1.7
...	State and local government education	8,671.3	10,002.3	1,331.0	1.4
737	Computer and data processing services	1,207.9	2,509.1	1,301.2	7.6
801–804	Offices of health practitioners	2,751.4	4,045.9	1,294.5	3.9
52–57, 59	Retail trade excluding eating and drinking places	14,125.5	14,991.3	865.8	.6
807–809	Health services, n.e.c.	1,171.9	1,968.3	796.4	5.3
50, 51	Wholesale trade	6,483.1	7,228.3	745.2	1.1
805	Nursing and personal care facilities	1,732.2	2,377.0	644.8	3.2
732, 733, 738	Miscellaneous business services	2,022.8	2,599.3	576.5	2.5
...	State and local general government, n.e.c.	6,085.9	6,658.4	572.5	.9
874	Management and public relations	873.2	1,400.0	526.8	4.8
15, 16, 17	Construction	5,400.0	5,899.9	499.9	.9
82	Educational services	2,020.1	2,478.1	458.0	2.1
791, 799	Amusement and recreation services, n.e.c.	1,108.6	1,565.3	456.7	3.5
832, 839	Individual and miscellaneous social services	846.3	1,265.9	419.6	4.1
806	Hospitals	3,813.5	4,229.0	415.5	1.0
836	Residential care	672.1	1,069.8	397.7	4.8
752–754	Automobile parking, repair, and services	890.3	1,236.2	345.9	3.3
45	Air transportation	1,122.1	1,401.0	278.9	2.2
	Largest declines				
88	Private households	928.0	775.2	–152.8	–1.8
...	Federal general government	1,740.0	1,600.0	–140.0	–.8
01, 02	Agricultural production	1,059.0	942.9	–116.1	–1.2
...	State and local government enterprises, n.e.c.	598.2	490.2	–108.0	–2.0
231–238	Apparel	642.9	475.1	–167.8	–3.0
60	Depository institutions	2,023.5	1,950.0	–73.5	–.4
381	Search and navigation equipment	160.7	109.5	–51.2	–3.8
357	Computer and office equipment	363.0	313.7	–49.3	–1.4
271	Newspapers	442.3	394.9	–47.4	–1.1
131, 132	Crude petroleum, natural gas, and gas liquids	148.2	101.5	–46.7	–3.7
12	Coal mining	96.4	52.0	–44.4	–6.0
331	Blast furnaces and basic steel products	240.3	196.7	–43.6	–2.0
362	Electrical industrial apparatus	156.0	122.4	–33.6	–2.4
371	Motor vehicles and equipment	962.5	929.3	–33.2	–.4
346	Metal forgings and stampings	252.5	220.0	–32.5	–1.4
382	Measuring and controlling devices	297.0	265.0	–32.0	–1.1
221–224, 226, 228	Weaving, finishing, yarn, and thread mills	332.0	301.2	–30.8	–1.0
40	Railroad transportation	231.1	201.8	–29.3	–1.3
208	Beverages	178.5	149.3	–29.2	–1.8
492, pt. 493	Gas utilities	180.3	155.0	–25.3	–1.5

NOTE: n.e.c. = not elsewhere classified.

96 trend except in the case of industrial machinery and equipment, in which employment increased slightly over the earlier period.

The *computer manufacturing*[18] industry has the fastest projected rate of growth in real output—14.9 percent per year, on average—within the *industrial machinery and equipment* industry group. Both businesses and consumers are expected to maintain strong demand for computer equipment. Personal consumption of computers and accessories is projected to grow at an annual rate of 27 percent, from a real level of $61 billion in 1996 to $665.4 billion in 2006.[19] From 1986 through 1996, personal consumption of computers and accessories increased at a 39.9-percent annual rate, from $2.1 billion to $61 billion real terms. On the business side, investment in computer office equipment is expected to grow at an annual rate of 15.8 percent, compared to the 19-percent rate posted over the 1986–1996 period. Business investment in office equipment is projected to grow from the 1996 real level of $140.9 billion to $612.0 billion.[20] Although computer manufacturing output will have the strongest rate of growth among all the detailed industries, productivity gains lead to a projected decrease in employment from 363,000 in 1996 to 314,000 in 2006.

Other industries within the industrial machinery and equipment industry group with strong rates of real output growth are *construction and related machinery* and *industrial machinery, not elsewhere classified*, with 3.7- and 3.0-percent annual average growth rates, respectively. Both of these in-

dustries have projected gains in employment, although advances in productivity will hold the annual rate of job increase to less than 1 percent for both industries.

Within the industry group, *electronic and other electric equipment,* the *electronic components and accessories*[21] industry (7.3 percent) and the *miscellaneous electrical equipment* industry (4.4 percent) have the highest projected annual average rates of output growth. The next highest output growth rates are for the *household audio and video equipment* (2.7 percent) and the *communications equipment* (2.4 percent) industries. Projected changes in output for the remaining industries range from growth of 1.1 percent to a decline of 0.9 percent—as compared to the average 2.6-percent rate of increase for total output. Although the projected output growth for this industry group is strong (4.3 percent annually), continued advances in productivity are expected to result in a decline of 69,000 in wage and salary jobs from 1996 to 2006. Employment is projected to increase by 90,000 for *electronic components and accessories,* but the remaining industries within this industry group are expected to have declining employment.

Investment purchases of medical equipment and demand for medical supplies produced by the *medical equipment, instruments, and supplies* industry will be the principal driving force for growth in the *instruments and related products* in-

Table 7. Industries with largest output growth and declines, 1996–2006

Standard Industrial Classification	Industry description	Billions of chained (1992) dollars		Change	Average annual rate of change (percent)
		1996	2006	1996–2006	1996–2006
	Largest growth				
357	Computer and office equipment	158.8	635.6	476.8	14.9
50, 51	Wholesale trade	749.7	1090.9	341.2	3.8
737	Computer and data processing services	165.9	403.4	237.5	9.3
52–57, 59	Retail trade, excluding eating and drinking places	723.1	922.7	199.5	2.5
367	Electronic components and accessories	140.8	285.3	144.4	7.3
751	Automotive rentals, without drivers	107.7	238.7	131.0	8.3
15, 16, 17	Construction	608.1	730.8	122.7	1.9
48	Communications	302.1	422.3	120.1	3.4
65	Real estate	507.9	623.3	115.4	2.1
62	Security and commodity brokers	124.7	215.3	90.6	5.6
60	Depository institutions	279.0	358.2	79.1	2.5
491, pt. 493	Electric utilities	150.9	228.8	77.9	4.3
...	Owner-occupied dwellings	489.6	565.0	75.5	1.4
42	Trucking and warehousing	194.3	255.1	60.7	2.8
58	Eating and drinking places	254.2	314.9	60.7	2.2
308	Miscellaneous plastics products, n.e.c.	103.6	160.3	56.6	4.5
801–804	Offices of health practitioners	231.1	287.4	56.3	2.2
63	Insurance carriers	212.6	265.8	53.2	2.3
371	Motor vehicles and equipment	320.0	372.4	52.4	1.5
732, 733, 738	Miscellaneous business services	125.5	175.3	49.8	3.4
	Largest declines				
...	Federal general government	176.7	163.7	–13.0	–.8
21	Tobacco products	46.8	34.7	–12.0	–2.9
131, 132	Crude petroleum, natural gas, and gas liquids	74.0	65.0	–9.0	–1.3
...	Federal Government capital services	61.3	56.4	–4.9	–.8
321–238	Apparel	53.3	50.8	–2.6	–.5
271	Newspapers	31.9	30.4	–1.4	–.5
325, 326, 328, 329	Stone, clay, and miscellaneous mineral products	19.3	18.0	–1.4	–.7
391	Jewelry, silverware, and plated ware	6.5	5.3	–1.2	–2.0
361	Electric distribution equipment	11.9	10.9	–1.0	–.9
313, 314	Footwear, except rubber and plastic	3.3	2.4	–1.0	–3.3
...	Federal Government enterprises, n.e.c.	8.9	8.2	–.7	–.8
88	Private households	10.4	9.7	–.7	–.7
46	Pipelines, except natural gas	9.6	8.9	–.7	–.7
794	Commercial sports	9.0	8.4	–.6	–.7
348	Ordnance and ammunition	5.0	4.5	–.4	–.9
272	Periodicals	21.6	21.2	–.4	–.2
793	Bowling centers	2.3	2.0	–.4	–1.6
278	Blankbooks and bookbinding	5.2	5.0	–.2	–.3
387	Watches, clocks, and parts	0.7	.6	–.1	–1.0
345	Screw machine products, bolts, rivets, etc.	11.3	11.2	.0	.0

dustry group. Over the 1986–96 period, real output for this industry group rose at an annual rate of 2.0 percent, but employment declined by 182,000 jobs, or at an annual rate of 1.0 percent. The projected rate of output growth for instruments and related products is 2.1 percent annually. The *medical equipment, instruments, and supplies* industry has a projected output growth rate of 3.4 percent. It was the only industry within the instruments and related products group to have had actual employment gains—55,000 jobs—over the past decade. Over the projection period, it is the only industry within the group to have employment gains—42,000 by 2006, reflecting a 1.5-percent annual growth rate. Overall, employment for the instruments and related products industry group is expected to decline from the 1996 level of 854,000 to 770,000 in 2006.

Since the 1990–91 recession, employment for the *transportation equipment* industry group has not reattained its prerecession level of just over 2 million. In 1996, wage and salary employment for this industry group stood at 1.8 million. Defense cutbacks and the subsequent loss of markets[22] by the *aerospace* industry have contributed to the postrecession stagnation of the group. In 1996, two industries—*motor vehicles and equipment* and *aerospace*—accounted for 93 percent of output and 85 percent of wage and salary employment within the transportation equipment group. Since the mid-1980s, these two industries together have accounted for about these same percentages of output and employment. Their individual shares have been shifting, however, with motor vehicles gaining in shares of both employment and output.

In 1978, employment in the *motor vehicles and equipment* industry peaked at 1 million, then fell to 699,000 in the latter part of the 1981–82 recession. With the industry buffeted by high dollar exchange rates and stiff foreign competition, employment fluctuated around 860,000 from 1984 through the rest of the decade. During the 1990–91 recession, motor vehicle employment reached another trough, falling to 789,000 in 1991. However, improvements in the dollar's exchange rate, coupled with a concerted effort by the industry to boost productivity and public perceptions of quality, led to gains in both output and employment during the ensuing years. By 1996, industry employment had increased to 963,000 and output had reached an estimated $320 billion in 1992 dollars. Over the projection period, however, output growth is expected to be slower than the rate posted since the 1990–91 recession, and employment is expected to decline to 929,000. Several factors contribute towards the modest output growth and employment declines. The increased longevity and reliability of new autos will encourage consumers to maintain them, and to put off new purchases, as the autos built in the early to mid-1990s reach the 10-year mark. Slower growth in the driving age population, compared to the last 10 years, will work against increased output growth. Also, global competitive pressures, combined with global excess manufacturing capacity, will dampen domestic production.[23] On the employment side, the workers in this industry tend to be older than average, so that there should be a large number of retirements and transfers in the next decade. However, productivity increases will cause retiring and leaving workers to be replaced at less than a 1-to-1 ratio. The net effect for employment is a decline of 33,000 jobs from 1996 through 2006.

Employment the *aerospace* industry peaked at 905,000 in 1989 after steady increases since the late 1970s. By 1995, it had fallen to 549,000, largely because of defense cutbacks. By 1969, the the decline seems to have halted, with employment stabilized at around 550,000. Although defense cutbacks are expected to continue throughout the projections period, expectations of increased commercial passenger and freight traffic already have boosted orders for commercial aircraft. Also, noise regulations that take effect in the year 2000 are stimulating demand for new, quieter aircraft. Over the projection period, the industry is expected to accommodate itself to the new market realities, whereby military demand declines and private commercial demand increases in importance. The net result is a modest increase of 46,000 in employment to a level of 596,000 by 2006. The industry's output growth should remain fairly strong at 2.5 percent annually, slightly less than the 2.6-percent annual increase for total output.

Nondurable goods. Real output for nondurable manufacturing is projected to grow at a 1.8-percent annual rate over the 1996–2006 period. From 1986 through 1996, the annual rate of growth for nondurable manufacturing output was 2.1 percent. During the projection period, the rate of growth for nondurable output is slower than the comparable figures for all manufacturing and for durable manufacturing. This was also true during the previous 10 years. Employment in nondurable manufacturing is projected to decline as a consequence of productivity gains, contracting by 98,000 jobs. This is almost two-thirds more than the number of jobs lost in nondurable manufacturing during the years 1986–96. The nondurable manufacturing industry groups with the fastest rates of output growth are: *rubber and miscellaneous plastics products*; *petroleum and coal products*; and *paper and allied products.*

At a projected rate of 3.7 percent annually, output growth for the *rubber and miscellaneous plastics products* industry group is well above that for the total economy. However, it is slower than the 5.1-percent annual average posted during the 1986–96 period. From the 1996 level of 981,000, employment is expected to reach just over 1 million, reflecting annual growth of 1.1 percent. Employment is projected to increase more slowly than output due to productivity gains. The growth of this industry group is driven by the demand for the products of the detailed industry *miscellaneous plastics products*, which produces plastic objects used every day in homes and businesses as well as the plastic film and sheets used by

other manufacturing industries. During the 1986–96 period, output of miscellaneous plastics products grew at an annual rate of 5.8 percent, adding 151,000 jobs to the work force. This industry is projected to add 141,000 jobs to the 1996 level of 714,000 to reach 855,000 in 2006. Its annual rate of growth in employment, 1.8 percent, is slower than the 4.5-percent rate of increase in output because of productivity gains.

The petroleum and coal products industry group has a projected output growth rate of 2.6 percent, essentially keeping pace with the aggregate economy. Productivity advances will lead to a decline of 24,000, jobs from 142,000 to 118,000. *Petroleum refining* accounts for most of the employment and output of the industry group because it supplies the refined petroleum products for energy needs and as raw material for production of chemicals and plastics. Petroleum refining output is expected to grow at an annual rate of 2.8 percent during the projection period, and employment is expected to decline from 100,000 to 80,000.

Output and employment for the industry group, *paper and allied products*, is driven by consumer and business demand for finished paper products and by industry demand for the raw pulp and paper to make those finished paper products. The growth of the printing and publishing industry, and the demand for packaging products from other manufacturing industries are factors that drive the growth of the paper and allied products industry group. Employment is projected to grow by 21,000—from 681,000 to 702,000, or at an annual rate of 0.3 percent—over the 1996–2006 period. Output has a projected growth rate of 2.2 percent, a slight acceleration over the 0.7-percent rate recorded over the previous 10 years.

Employment for the *printing and publishing* industry group is projected to decline by 37,000 but still remain above 1.5 million. The growth rate for output will accelerate from a 1.0-percent annual rate over the 1986–96 period to a 1.5-percent annual rate from 1996 to 2006. The industries producing *newspapers* and *commercial printing and business forms* account for about 68 percent of the jobs and 59 percent of the output for printing and publishing. In 1996, newspaper employment was 442,000, while commercial printing and business forms had 609,000 jobs. Newspaper employment and output are both projected to decline. Significant competition from nonprint media for advertising revenues, rising printing costs, and declining readership are the principal factors affecting the health of newspaper industry. The projected employment for commercial printing and business forms changes very little from the 609,000 jobs in 1996. Output, however, has a projected growth rate of 2.4 percent, indicating strong productivity gains. Desktop publishing and advances in photocopying and computerized printing have led to a proliferation of print shops. Desktop publishing presents a double-edged stimulus to the industry: many businesses now find it easy to produce their printed business materials with personal computers, and laser printers, but the same equipment also encourages development of more sophisticated printed materials, which require a print shop for final production.

Employment for the *chemicals and allied products* industry group is projected to increase by 38,000, and to reach nearly 1.1 million in 2006. The group's real output is projected to grow at an average annual rate of 1.8 percent, down from the 2.4-percent rate recorded over the 1986–96 period. Output for the *drugs*[24] industry has a projected annual growth rate of 2.9 percent—faster than the pace for the economy as a whole, but slower than the industry's historical growth rate of 4.2 percent during the 1986–96 period. Employment growth is expected to remain strong, adding 60,000 jobs at a 2.1-percent rate.

For the two industry groups *textile mill products* and *apparel and other textile products*, the long-term trends toward increasing automation and use of offshore labor for work processes that cannot be easily automated are expected to continue. Of the two industry groups, textile mill products has most benefited from automation. Productivity gains resulting from further automation and from the implementation of new technologies are expected during the projection period. Apparel production remains highly labor intensive. Offshore assembly of apparel has become, and is expected to continue to be, the norm. Demand for apparel is, of course, affected by fashion tastes and changes in cultural attitudes towards appropriate dress. However, the rate of growth of the population is an important restraint, and the slowing of population increases during the projection period is expected to dampen consumer demand for clothing. The products of the textile mill industry group mostly serve as inputs for other manufactured products. Apparel is an example, as are cloth seat coverings in automobile and furniture production. The construction and real estate industries also are important users of textile mill products. Employment in the textile mill products industry group is projected to decline from 624,000 to 588,000 jobs between 1996 and 2006. Jobs in the apparel industry group employment are projected to decrease from 864,000 to 714,000. Within the apparel industry group, the detailed industry apparel accounted for 643,000 wage and salary jobs in 1996. With the projected loss of 475,000 jobs, apparel will be one of the industries with the largest numerical decline through the 1996–2006 period. (See table 6.)

THIS SET OF EMPLOYMENT PROJECTIONS is characterized by slowing growth in total employment as a consequence of slowing population and labor force growth. Most of the projected employment increase is in the service-producing sector of the economy, as has been the case historically, and in the last several sets of BLS projections. The majority of the employment growth in the service-producing sector is concentrated in the services division, and within the services division, most of the increase takes place in Business Services (SIC 73) and Health Services (SIC 80). □

Footnotes

[1] For further discussion of the labor force see, Howard N Fullerton, Jr., "Labor force 2006: slowing down and changing composition," this issue, pages 23–38.

[2] For further discussion of the macroeconomic influences, see Tom Boustead, "The U.S. economy to 2006," this issue, pages 6–22.

[3] This article discusses gross duplicated output, which includes not only GDP, or all final demand purchases of new goods and services, but also all new goods and services produced as intermediate goods for use in further production.

[4] The bulk of the engineering, management, and related services industry group, along with the computer and data processing services industry within business services, are considered to be "high-technology" industries. For a discussion of the employment shifts between manufacturing high-tech industries and services high-tech industries, see William Luker, Jr., and Donald Lyons, "Employment shifts in high-technology industries, 1986–96," *Monthly Labor Review*, June 1997.

[5] For further discussion of the health care industry, see Laura Freeman, "Home-sweet-home health care," pp. 3–11; and Barbara H. Wootton and Laura T. Ross, "Hospital staffing patterns in urban and nonurban areas," pp. 23–33, both in the *Monthly Labor Review*, March 1995.

[6] Richard A. Rettig, *Health Care in Transition: Technology Assessment In the Private Sector* (Santa Monica, CA, The RAND Corporation, 1997), p 3.

[7] The rapid growth of temporary help services, which makes up most of personnel supply services, has generated much speculation about the changing nature of the relationship between employer and employee, and created questions about the "permanence" of jobs in the future. The term "contingent worker" often has been used in this discussion. A indepth review of the phenomenon is not undertaken here, because the Bureau has already published a series of articles dealing with the issue of the contingent worker. (See the *Monthly Labor Review*, October 1996.) For a discussion of the temporary help services industry, see Lewis M. Segal and Daniel G. Sullivan, "The Growth of Temporary Services," *Journal of Economic Perspectives*, Spring 1997, pp. 117–36.

[8] For further discussion, see Sheila McConnell, "The role of computers in reshaping the work force," pp. 3–5; and William C. Goodman, "Software, engineering industries: threatened by technological change?" pp. 37–45, both in *Monthly Labor Review*, August 1996.

[9] For more indepth reading, see William Goodman, "Boom in day care industry the result of many social changes," *Monthly Labor Review*, August 1995, pp. 3–12.

[10] This article discusses gross duplicated output, which includes not only GDP, or all final demand purchases of new goods and services, but also all new goods and services produced as intermediate goods for use in further production.

[11] Discussions of industry-level productivity refer to labor productivity taken as the ratio of output to hours of work. This measure is calculated by the Bureau's Office of Employment Projections, and is derived from data developed for use in the projections modeling system. It is not part of the official BLS statistics on productivity produced by the Office of Productivity and Technology.

[12] For a discussion of the application of computer technology in commercial banking, see Teresa L. Morisi, "Commercial banking transformed by computer technology," *Monthly Labor Review*, August 1996, pp. 30–37.

[13] For further reading, see Teresa L. Morisi, "Employment in public schools: the student-to-employee ratio," *Monthly Labor Review*, July 1994, pp. 40–44.

[14] For 1970 and 1975, see "Preliminary Estimates of the Population of the United States, by Age, Sex, and Race: 1970 to 1981," *Current Population Reports*, Series P-25, No. 917 (Bureau of the Census, 1982). For 1980 and 1985, see "U.S. Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1991," *Current Population Reports*, Series P-25, No. 1095 (Bureau of the Census, 1992). For 1990, 1995, and 1996, see "U.S. Population Estimates by Age, Sex, Race, and Hispanic origin: 1990 to 1996," PPL-57 (unpublished paper) (Bureau of the Census, 1997). For projected 2006, see "Population Projections of the United States, by Age, Sex, Race, and Hispanic Origin: 1995 to 2050," *Current Population Reports*, Series P-25, No. 1130 (Bureau of the Census, 1995).

[15] *Annual Energy Outlook 1997* (U.S. Department of Energy, Energy Information Administration.)

[16] See Boustead, "The U.S. economy to 2006," for further discussion of macro result. The macro economic model solves directly for fixed and residential investment.

[17] *Ibid.*

[18] For a discussion of the competitive pressures faced by the computer manufacturing industry, see Jacqueline Warnke, "Computer manufacturing: change and competition," *Monthly Labor Review*, August 1996, pp. 18–29.

[19] See Boustead, "The U.S. economy 2006."

[20] *Ibid.*

[21] For a discussion of the semiconductor industry, see Fancisco A. Moris, "Semiconductors: the building blocks of the information revolution," *Monthly Labor Review*, August 1996, pp. 6–15.

[22] For a discussion of the impacts of cutbacks on defense industries and attempts to forge new markets, see Ron L. Hetrick, "Employment in high-tech defense industries in a post cold war era," *Monthly Labor Review*, August 1996, pp. 57–63.

[23] "The coming car crash," *The Economist*, May 10, 1977, pp. 21–23.

[24] For more indepth reading, see Stephen Heffler, "Drugs manufacturing: a prescription for jobs," *Monthly Labor Review*, March 1995, pp. 12–22.

[25] For additional information, see Lauren A. Murray, "Unraveling employment trends in textiles and apparel," *Monthly Labor Review*, August 1995, pp. 62–72.

Employment outlook: 1996–2006

Occupational employment projections to 2006

Occupations requiring at least an associate's degree are expected to grow faster than those requiring less education or training

George T. Silvestri

Total employment is projected to increase by 18.6 million jobs over the 1996–2006 period, rising from 132.4 million to 150.9 million, according to the latest projection of the Bureau of Labor Statistics (BLS).[1] The projected 14-percent change in employment is less than the 19-percent increase attained during the previous 10-year period, 1986–96, when the economy added 21 million jobs. Consequently, growth rates among the major occupational groups will be very different from the past, resulting in a change in the structure of employment from 1996 to 2006.

The economy will continue generating jobs for workers at all levels of education and training, although average growth is projected to be greater for detailed occupations requiring at least an associate's degree than for occupations requiring less training. Still, many occupations requiring less formal education or training are projected to have above-average growth as well. Many slower growing occupations, some requiring little education and training and others having significant educational requirements, will add significant numbers of jobs primarily due to their large employment bases. There also will be numerous job openings due to the need to replace workers who leave the labor force or move to other occupations.

This article compares the 1996–2006 projected changes in the structure of employment at the major occupational group level with the changes that occurred in the previous 10-year period, 1986–1996. It also identifies the detailed occupations that are projected to grow at the fastest *rate*, as well as those with the largest *numerical* increases, displaying the current educational requirements and earnings of the occupations in each of these growth categories. A discussion of the detailed occupations projected to have the largest employment declines follows. Also discussed are the total number of job openings projected to occur due to growth in the economy and the net replacement needs resulting from workers who leave the labor force or transfer to other occupations. The article concludes with a discussion of the distribution of employment in the base year (1996) and projected job openings by levels of education and earnings.

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Major groups

Among the major occupational groups, employment in professional specialty occupations will increase the fastest and add the most jobs from 1996 to 2006. (See table 1.) The group with the second fastest growth rate is technicians and related support occupations. This is a small group, however, and is expected to account for the second smallest numerical increase in jobs over the period. The next fastest growing group is service occupations. Together, professional specialty occupations and service occupations, which are on opposite ends of the educational attainment and

earnings spectrum, are expected to provide nearly half of the total job growth from 1996 to 2006. In addition, two other groups are projected to have faster-than-average growth rates—executive, administrative, and managerial occupations; and marketing and sales workers. Employment in precision production, craft, and repair occupations; operators, fabricators, and laborers; and administrative support occupations, including clerical is expected to increase, but at a slower rate than overall employment. Finally, employment in the major group, agriculture, forestry, fishing, and related occupations, is projected to remain virtually unchanged over the projected period.

As a result of the different growth rates among the major occupational groups, the structure of total employment will change by the year 2006. Executive, administrative, and managerial occupations; professional specialty occupations; technicians and related support occupations; marketing and sales occupations; and service occupations each will increase their share of total employment, as they did in the previous 10-year period, 1986–96. The group with the largest increase in employment share in the former period, professional specialty occupations, is expected to again have the largest share over the coming period. On the other hand, administrative support occupations, including clerical; agriculture, forestry, fishing and related occupations; precision production, craft, and repair occupations; and operators, fabricators, and laborers all are expected to decline as a proportion of total employment, as they did in the 1986–96 period.

While the group administrative support occupations, including clerical, is expected to register the largest decrease in employment share from 1996 to 2006, precision production, craft, and repair occupations; and operators, fabricators, and laborers both had larger declines in the previous 10-year period. The ranking of the major occupational groups by employment size is expected to be virtually the same in 2006 as it was in 1996, with administrative support occupations, including clerical ranked first, and agriculture, forestry, fishing and related occupations ranked last.

The number of *executive, administrative, and managerial workers* is projected to increase by 17 percent, or 2.3 million, from 1996 to 2006. This rate of growth is significantly slower than that of the 1986–96 period, when the group added 3 million jobs. Moreover, while managers had the second fastest growth rate among the major occupational groups in the earlier period, they are expected to rank fifth in terms of percent change in employment over the coming period. The result will be only a slight increase in the share of total employment represented by these workers.

Part of the reason for the expected slowdown in job growth among executive, administrative, and managerial workers is the trend toward job restructuring. Although employment in many different fields may be affected by this trend, the use of middle-level managers in the future is expected to be reduced more than many other occupations. This is especially true in manufacturing, an industry in which the employment of managers is projected to increase by a mere 5,700 jobs through 2006. In contrast, this group added 109,000 workers from 1986 to 1996, even while overall employment in manufacturing declined by nearly half-a-million jobs over the period.

Employment among managers also is projected to slow down considerably in construction and government. Over the 1996–2006 period, employment is projected to grow by only

Table 1. Employment by major occupational group, 1986, 1996, and projected 2006

(Numbers in thousands of jobs)

Occupational group	Employment						Change			
	Number			Percent distribution			Number		Percent	
	1986	1996	2006	1986	1996	2006	1986–96	1996–2006	1986–96	1996–2006
Total, all occupations	111,375	132,353	150,927	100.0	100.0	100.0	20,978	18,574	18.8	14.0
Executive, administrative, and managerial	10,568	13,542	15,866	9.5	10.2	10.5	2,974	2,324	28.1	17.2
Professional specialty	13,589	18,173	22,998	12.2	13.7	15.2	4,584	4,826	33.7	26.6
Technicians and related support	3,724	4,618	5,558	3.3	3.5	3.7	894	940	24.0	20.4
Marketing and sales	11,496	14,633	16,897	10.3	11.1	11.2	3,137	2,264	27.3	15.5
Administrative support, including clerical	20,871	24,019	25,825	18.7	18.1	17.1	3,147	1,806	15.1	7.5
Service	17,427	21,294	25,147	15.6	16.1	16.7	3,867	3,853	22.2	18.1
Agriculture, forestry, fishing, and related occupations,	3,661	3,785	3,823	3.3	2.9	2.5	124	37	3.4	1.0
Precision production, craft, and repair	13,832	14,446	15,448	12.4	10.9	10.2	614	1,002	4.4	6.9
Operators, fabricators, and laborers	16,206	17,843	19,365	14.6	13.5	12.8	1,637	1,522	10.1	8.5

73,000 jobs in construction and 43,000 jobs in government, compared to a growth of 177,000 jobs and 275,000 jobs, respectively, from 1986 to 1996. In several other major industry sectors, however, the number of executive, administrative, and managerial workers is expected to grow substantially. The services industry division[2] is expected to account for the largest job growth (1.2 million jobs), followed by finance, insurance, and real estate (284,000 jobs), wholesale and retail trade (274,00 jobs), and transportation, communications, and public utilities (76,000 jobs). The number of self-employed executive, administrative, and managerial workers is expected to increase by 386,000 jobs—more than any other major occupational group—to over 2 million by 2006.

Employment in *professional specialty occupations* is projected to grow the fastest and increase more—by nearly 5 million workers—than any other major group in the coming period, 1996–2006. This group had the fastest rate of increase and the largest job growth during the previous 10-year period. In terms of employment share, professional specialty occupations are expected to experience the largest increase, rising from 13.7 percent of total employment in 1996, to 15.3 percent in 2006. Nearly 70 percent of the job growth is expected among teachers, librarians, and counselors; computer, mathematical, and operations research occupations; and health assessment and treating occupations. These subgroups also registered the largest job gains among the professional specialties during the previous period. Employment in the engineering subgroup is expected to add 244,000 jobs by 2006, a significant turnaround from the small job losses posted since the mid-1980s.

Professional specialty occupations are projected to increase in all major industrial sectors of the economy except mining, in which employment among professionals is likely to continue its long-term decline. Even in manufacturing, an industry in which overall employment is projected to decline by 350,000 workers by 2006, employment of professional workers is expected to increase by 162,000 jobs (mainly for computer engineers, scientists, and systems analysts). Despite the widespread growth among professionals, nearly 90 percent of the employment increase for these workers is expected to occur in the services industry division, led by educational services and health services.

Other service industries expected to contribute significantly to the growth of professional workers include social services; business services; and engineering and management services. Employment of professionals in Federal, State, and local government is projected to grow by 153,000— less than half the increase of the 1986–96 period. The number of self-employed professional specialty workers is expected to total more than 1.7 million by 2006, an increase of nearly 222,000 jobs. Opportunities for people who want to start their own businesses will be especially abundant among computer, mathematical, and operations research occupations; writers, artists, and entertainers; and health assessment and treating occupations. In contrast, the number of self-employed workers in health diagnosing occupations, such as physicians and dentists, is projected to decline by nearly 20,000.

Employment of *technicians and related support workers* is projected to grow by 940,000 jobs by 2006. The 20-percent change in employment over the period is slightly less than the 24-percent increase attained in the previous period, 1986–96. About 60 percent of the projected employment growth among technicians—571,000 jobs—is expected within the subgroup, health technicians and technologists. Considerable growth also is expected among engineering and science technicians and technologists; computer programmers; and paralegals.

Virtually all of the projected job growth for technicians and related support workers is expected in the services industry division. Within services, about half of the jobs for technicians are expected in the large and rapidly growing health services industry. Engineering and management services and business services also are expected to show large employment increases for this occupation. Compared with the previous period, projected job increases for technicians through 2006 are expected to be smaller in agriculture, forestry, and fishing; transportation, communications, and public utilities; wholesale and retail trade; finance, insurance and real estate; and government. As in the earlier period, employment of technicians in mining and manufacturing is expected to continue its downward trend through 2006.

Employment in *marketing and sales occupations* is projected to increase by 2.3 million workers from 1996 to 2006, or 16 percent. By contrast, both the numerical change and the percent change for this group was much greater from 1986 to 1996—3.1 million workers and 27 percent, respectively. The group's projected share of total employment will increase slightly by 2006. The reduced job growth for marketing and sales workers is attributable, in part, to a projected employment increase in wholesale and retail trade that is 1.6 million less than the job gains posted during the previous period.

The slowing of employment growth among marketing and sales workers results partly from the increased use of automated sales systems, which decreases the overall demand for labor in the wholesale and retail trade sectors. Substantial employment growth among marketing and sales workers is expected in the services industry division (621,000 jobs); an increase of 92,000 jobs for these workers is expected in transportation, communications, and public utilities. In finance, insurance, and real estate, employment among sales workers is expected to grow by 154,000 jobs by 2006, after having declined by 52,000 jobs during the previous period. Finally, the number of self-employed marketing and sales workers is expected to grow to nearly 2 million by 2006, an increase of 148,000 jobs over the 1996 level.

The number of workers in *administrative support occupations, including clerical* is projected to increase by 1.8 million jobs, or 8 percent, from 1996 to 2006. This is in marked contrast to the previous 10-year period, when this group added 3.1 million jobs and grew by 15 percent. Consequently, the share of total employment represented by these workers is projected to decline significantly, from 18.1 percent in 1996 to 17.1 percent by 2006—the largest drop for a major occupational group. Nevertheless, with a projected employment level of 25.8 million workers in 2006, administrative support occupations, including clerical, is expected to remain the largest major occupational group, as it was in both 1986 and 1996.

Several detailed occupations within administrative support occupations, including clerical, are expected to decline in the coming period, instead of growing as they did from 1986 to 1996. Computer and peripheral equipment operators; bookkeeping, accounting, and auditing clerks; secretaries, except legal and medical; duplicating, mail, and other office machine operators; and general office clerks all are projected to decline as these occupations continue to be affected by technological change, such as office automation.

Occupations that involve a great deal of contact with people, and therefore are less affected by changing technology, are projected to have average or higher-than-average rates of growth and substantial numerical job gains. These occupations include adjusters, investigators and collectors (322,000 jobs); hotel desk clerks (30,000 jobs); receptionists and information clerks (318,000 jobs); clerical supervisors and managers (262,000 jobs); and teacher aides and educational assistants (370,000 jobs). The projected increase of 2 million jobs for administrative support occupations, including clerical, in services; finance, insurance, and real estate; and transportation, communications, and public utilities is expected to be partially offset by projected declines in virtually every other major industry division, the largest of which are in government and manufacturing.

Employment in *service occupations* is projected to increase by 3.9 million, or 18 percent, the second largest numerical gain and third largest rate of growth among the major occupational groups. Employment in this group increased by about the same number of jobs during the recent past. The proportion of total employment represented by these workers is expected to continue increasing, as it has been since 1986, and account for a share of total employment in 2006 that is just slightly less than that for administrative support occupations, including clerical (the largest projected major occupational group).

Nearly two-thirds of the 3.9 million additional service jobs projected through 2006 are in the rapidly growing services industry division, led by health services, social services, and business services. In addition, retail trade and government are expected to provide more than 1.3 million service jobs. Health service occupations, which grew by 341,000 workers from 1986 to 1996, are projected to increase by more than twice that amount (706,000 jobs).

Other occupational subgroups with large projected job increases include food preparation and service workers (1.2 million jobs); cleaning and building service occupations, except private households (168,000 jobs); protective service occupations (457,000 jobs); and personal service occupations (1.1 million jobs). Employment in private household occupations is expected to continue its long-term decline, registering a loss of 121,000 jobs by 2006. Finally, the number of self-employed service workers is expected to increase by 257,000 jobs, to nearly 1.5 million by 2006—the second largest gain among the major occupational groups. Opportunities will be especially plentiful among cleaning and building service occupations, except private household; child care workers; and cosmetologists and related workers.

Agriculture, forestry, fishing, and related occupations are projected to grow by 37,000 jobs in the coming period, after adding 124,000 over the 1986–96 period. Within this major group, projected job losses for farm operators and managers (especially self-employed farmers) and farm workers are partially offset by projected increases for gardening, nursery, and greenhouse and lawn service occupations. Agriculture, forestry, fishing, and related workers are expected to decline to 2.5 percent of total employment, remaining the smallest of the major occupational groups through 2006.

Employment in *precision production, craft, and repair occupations* is projected to increase by 1 million jobs and grow by 7 percent from 1996 to 2006. This slower-than-average growth rate is a continuation of the 1986–96 trend, in which employment grew by 4 percent, adding 614,000 jobs. These workers are expected to account for 10.2 percent of total employment in 2006—down from 10.9 percent in 1996. The largest job growth in this group is expected among mechanics, installers, and repairers (656,000 jobs); construction trades workers (304,000 jobs); blue-collar worker supervisors (48,000 jobs); and plant and system occupations (32,000 jobs). These job categories also registered large increases during the 1980s.

The precision production occupations, which are highly concentrated in manufacturing, are expected to decline by about 38,000 jobs, due to continuing advances in technology, changes in production methods, and the overall decline in manufacturing employment. These projected job losses, however, are expected to be offset by the very significant gains in services and construction. The number of self-employed precision production, craft, and repair workers is expected to grow to 1.7 million, an increase of 112,000 jobs, the majority of which will be for blue-collar worker supervisors; construction trades workers; and mechanics, installers, and repairers.

The number of *operators, fabricators, and laborers* is expected to increase by 1.5 million workers, or 9 percent, from

1996 to 2006. In the previous 10-year period, this group of workers increased by 10 percent. The proportion of total employment represented by these workers is projected to decline from 13.5 percent to 12.8 percent over the period. Most of the job growth in this group is expected among transportation and material moving machine and vehicle operators (especially truck drivers, with an increase of 442,000 jobs) and helpers, laborers, and material movers, hand (especially hand packers and packagers, with an increase of 222,000 jobs).

The manufacturing sector is expected to experience a loss of 160,000 jobs for operators, fabricators, and laborers, largely resulting from increased automation as well as the overall projected decline in manufacturing employment. However, the projected declines will be more than offset by the gains in services; transportation; and wholesale and retail trade. Jobs for these workers in the trade sector, which increased by 413,000 jobs from 1986 to 1996, are projected to increase much more slowly through 2006 (253,000 jobs), largely as a result of the increased utilization of automated material moving equipment.

Detailed occupations

BLS has developed projections for more than 500 detailed occupations. The growth rates range from an increase of 118 percent for database administrators, computer support specialists, and all other computer scientists, to a decline of 75 percent for typesetting and composing machine operators and tenders. (See table 2.) In the following section, projected occupational employment is analyzed from two perspectives, percent change and numerical change, because one can be large and the other small, depending on the size of employment in the base year. The employment of occupational therapy assistants and aides, for example, is projected to grow very rapidly over the 1996–2006 period (69 percent), while adding 11,000 jobs. In contrast, the employment of retail salespersons, which is expected to grow by only 10 percent in the coming period, will increase by 408,000 jobs. An interesting comparison exists between the total increase in employment from those occupations that are projected as the fastest growing (table 3), and the increase from those projected to account for the largest numerical increase (table 4). The first group accounts for 20 percent of the projected overall growth in employment, while the second group accounts for nearly half of the increase (several occupations are included in both of the groups).

Educational requirements and earnings of workers are quite varied among the 30 occupations that are projected to grow the fastest, as well as the 30 occupations with the largest numerical increases. (See the appendix for a description of the education and training categories used in this article.) About half of the fastest-growing occupations require education or training beyond high school; the top three require at least a bachelor's degree and had median weekly earnings in 1996 that were much higher than the average for all full-time wage and salary workers ($483). About a third of the occupations with the largest job growth require some type of postsecondary education or training. The remainder of the occupations on the two lists require high school graduation or less education, and most had below-average earnings in 1996. Although employers will continue to require workers at all levels of education and training, those with the most education or work experience usually will have more options in the job market and better prospects for obtaining the higher-paying jobs.

Fastest growing occupations. Most of the 30 fastest-growing occupations are concentrated in one or more of the rapidly growing industries shown in table 3.[3] Several of these occupations are found in the very rapidly growing computer and data processing services industry, which is expected to more than double its employment size to 2.5 million workers by 2006. The three fastest growing occupations have significant employment in this industry: database administrators, computer support specialists, and all other computer scientists; computer engineers; and systems analysts.

The demand for computer engineers and computer systems analysts is being spurred by the rapid advances in computer technology and the continuing demand for new computer applications, including Internet, Intranet, and World Wide Web applications. Rapid growth is expected in the number of database administrators to reorganize and restructure data to better suit the needs of users, and to aid in design implementation and ensure system security. Strong demand also is projected for computer support specialists to provide technical assistance to computer users in the areas of hardware, software, and systems. All three of these occupations also are found in table 4, which lists the occupations with the largest projected numerical job growth through 2006. They experienced a very fast rate of growth and large numerical increases in employment from 1986 to 1996 as well.

Two other fast-growing occupations also are expected to benefit from the proliferation of computers in the workplace. Employment of desktop publishing specialists will grow due to the increasing proportion of page layout and design that will be performed using computers. Similarly, the demand for data processing equipment repairers should rise in response to the overall growth of computer equipment, the development of new computer applications, and lower computer prices.

Almost half of the 30 fastest growing occupations have significant employment in the health services sector, which is expected to increase more than twice as fast as the economy as a whole and add over 3 million jobs by 2006. These health-related occupations also dominated this list in the earlier period. Employment among personal and home care aides and home health aides is concentrated in the home health care

Table 2. Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
Total, all occupations	132,353	150,927	100.0	100.0	18,574	14.0	50,563
Executive, administrative, and managerial occupations	13,542	15,866	10.2	10.5	2,324	17.2	5,174
Managerial and administrative occupations	9,539	11,262	7.2	7.5	1,723	18.1	3,745
Administrative services managers	291	324	.2	.2	33	11.3	95
Communication, transportation, and utilities operations managers	156	179	.1	.1	23	14.5	56
Construction managers	249	294	.2	.2	45	18.0	98
Education administrators	386	430	.3	.3	45	11.6	146
Engineering, science, and computer systems managers	343	498	.3	.3	155	45.2	228
Financial managers	800	946	.6	.6	146	18.3	297
Food service and lodging managers	589	757	.4	.5	168	28.5	293
Funeral directors and morticians	33	33	.0	.0	1	2.0	8
General managers and top executives	3,210	3,677	2.4	2.4	467	14.6	1,149
Government chief executives and legislators	93	95	.1	.1	2	2.2	22
Industrial production managers	207	202	.2	.1	–5	–2.5	44
Marketing, advertising, and public relations managers	482	620	.4	.4	138	28.5	226
Personnel, training, and labor relations managers	216	254	.2	.2	38	17.8	97
Property and real estate managers	271	315	.2	.2	44	16.4	87
Purchasing managers	232	251	.2	.2	18	7.8	71
All other managers and administrators	1,981	2,387	1.5	1.6	406	20.5	828
Management support occupations	4,003	4,604	3.0	3.1	601	15.0	1,429
Accountants and auditors	1,002	1,127	.8	.7	125	12.4	330
Budget analysts	66	73	.0	.0	8	11.7	20
Claims examiners, property and casualty insurance	57	69	.0	.0	13	22.2	20
Construction and building inspectors	66	76	.1	.1	10	14.5	29
Cost estimators	188	217	.1	.1	29	15.5	45
Credit analysts	40	46	.0	.0	6	15.8	14
Employment interviewers, private or public employment service	87	101	.1	.1	14	16.3	39
Inspectors and compliance officers, except construction	163	172	.1	.1	8	5.2	36
Loan officers and counselors	209	268	.2	.2	59	28.1	99
Management analysts	244	296	.2	.2	52	21.2	79
Personnel, training, and labor relations specialists	328	387	.2	.3	59	17.9	153
Purchasing agents, except wholesale, retail, and farm products	224	238	.2	.2	14	6.4	77
Tax examiners, collectors, and revenue agents	64	66	.0	.0	1	2.3	14
Underwriters	95	100	.1	.1	6	6.1	29
Wholesale and retail buyers, except farm products	183	183	.1	.1	0	–.1	48
All other management support workers	988	1,185	.7	.8	198	20.0	396
Professional specialty occupations	18,173	22,998	13.7	15.2	4,826	26.6	8,286
Engineers	1,382	1,632	1.0	1.1	250	18.1	580
Aeronautical and astronautical engineers	53	57	.0	.0	4	7.8	10
Chemical engineers	49	57	.0	.0	7	15.0	22
Civil engineers, including traffic engineers	196	231	.1	.2	35	17.9	82
Electrical and electronics engineers	367	472	.3	.3	105	28.5	197
Industrial engineers, except safety engineers	115	131	.1	.1	16	13.6	39
Mechanical engineers	228	264	.2	.2	36	15.8	81
Metallurgists and metallurgical, ceramic, and materials engineers	18	20	.0	.0	1	6.8	6
Mining engineers, including mine safety engineers	3	3	.0	.0	0	–12.6	1

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
Nuclear engineers	14	14	0.0	0.0	1	5.2	4
Petroleum engineers	13	11	.0	.0	–2	–14.3	4
All other engineers	326	373	.2	.2	47	14.4	134
Architects and surveyors	212	232	.2	.2	20	9.7	66
Architects, except landscape and marine	94	113	.1	.1	18	19.6	39
Landscape architects	17	20	.0	.0	3	20.7	7
Surveyors	101	99	.1	.1	–1	–1.4	20
Life scientists	180	221	.1	.1	41	22.6	65
Agricultural and food scientists	24	29	.0	.0	5	19.6	10
Biological scientists	83	103	.1	.1	21	25.1	26
Foresters and conservation scientists	37	43	.0	.0	6	17.4	14
Medical scientists	35	44	.0	.0	9	25.1	14
All other life scientists	1	1	.0	.0	0	–3.0	0
Computer, mathematical, and operations research occupations	1,028	2,038	.8	1.4	1,010	98.2	1,099
Actuaries	16	16	.0	.0	0	1.9	3
Computer systems analysts, engineers, and scientists	933	1,937	.7	1.3	1,004	107.6	1,072
Computer engineers and scientists	427	912	.3	.6	485	113.4	518
Computer engineers	216	451	.2	.3	235	109.1	250
Database administrators, computer support specialists, and all other computer scientists	212	461	.2	.3	249	117.8	268
Systems analysts	506	1,025	.4	.7	520	102.8	554
Statisticians	14	14	.0	.0	0	.7	2
Mathematicians and all other mathematical scientists	16	17	.0	.0	1	9.1	4
Operations research analysts	50	54	.0	.0	4	7.8	18
Physical scientists	207	242	.2	.2	36	17.3	81
Chemists	91	108	.1	.1	17	18.3	36
Geologists, geophysicists, and oceanographers	47	54	.0	.0	7	14.6	17
Meteorologists	7	8	.0	.0	1	8.2	2
Physicists and astronomers	18	17	.0	.0	0	–1.6	4
All other physical scientists	43	55	.0	.0	12	27.5	21
Social scientists	263	288	.2	.2	24	9.2	63
Economists	51	60	.0	.0	9	18.6	23
Psychologists	143	154	.1	.1	11	8.0	25
Urban and regional planners	29	31	.0	.0	1	4.7	6
All other social scientists	41	43	.0	.0	2	5.1	9
Social, recreational, and religious workers	1,469	1,939	1.1	1.3	470	32.0	792
Clergy	208	236	.2	.2	28	13.2	68
Directors, religious activities and education	85	115	.1	.1	30	35.5	46
Human services workers	178	276	.1	.2	98	55.4	131
Recreation workers	233	285	.2	.2	52	22.3	155
Residential counselors	180	254	.1	.2	74	41.2	115
Social workers	585	772	.4	.5	188	32.1	277
Lawyers and judicial workers	699	820	.5	.5	120	17.2	222
Judges, magistrates, and other judicial workers	78	79	.1	.1	2	2.2	14
Lawyers	622	740	.5	.5	118	19.0	209
Teachers, librarians, and counselors	6,565	7,914	5.0	5.2	1,349	20.6	2,714
Teachers, preschool and kindergarten	499	596	.4	.4	98	19.6	190
Teachers, elementary	1,491	1,644	1.1	1.1	153	10.3	438
Teachers, secondary school	1,406	1,718	1.1	1.1	312	22.2	731
Teachers, special education	407	648	.3	.4	241	59.1	299
College and university faculty	864	1,026	.7	.7	162	18.8	412

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
Other teachers and instructors	878	1,118	0.7	0.7	240	27.3	326
Farm and home management advisors	16	10	.0	.0	–6	–38.3	1
Instructors and coaches, sports and physical training	303	427	.2	.3	123	40.7	151
Adult and vocational education teachers	559	682	.4	.5	123	21.9	174
Instructors, adult (nonvocational) education	248	299	.2	.2	51	20.6	74
Teachers and instructors, vocational education and training	311	383	.2	.3	72	23.0	100
All other teachers and instructors	671	770	.5	.5	99	14.8	192
Librarians, archivists, curators, and related workers	174	185	.1	.1	10	5.9	53
Curators, archivists, museum technicians, and restorers	20	23	.0	.0	3	14.7	8
Librarians, professional	154	162	.1	.1	7	4.8	45
Counselors	175	209	.1	.1	33	19.1	73
Health diagnosing occupations	877	1,039	.7	.7	162	18.4	305
Chiropractors	44	55	.0	.0	12	27.1	20
Dentists	162	175	.1	.1	13	8.1	47
Optometrists	41	46	.0	.0	5	11.7	13
Physicians	560	678	.4	.4	118	21.0	197
Podiatrists	11	12	.0	.0	1	10.1	3
Veterinarians and veterinary inspectors	58	71	.0	.0	13	22.7	25
Health assessment and treating occupations	2,684	3,393	2.0	2.2	709	26.4	1,090
Dietitians and nutritionists	58	69	.0	.0	11	18.2	22
Pharmacists	172	194	.1	.1	22	12.6	64
Physician assistants	64	93	.0	.1	30	46.6	39
Registered nurses	1,971	2,382	1.5	1.6	411	20.8	683
Therapists	419	655	.3	.4	236	56.3	282
Occupational therapists	57	95	.0	.1	38	66.1	44
Physical therapists	115	196	.1	.1	81	70.8	94
Recreational therapists	38	46	.0	.0	8	21.3	12
Respiratory therapists	82	119	.1	.1	37	45.8	46
Speech–language pathologists and audiologists	87	131	.1	.1	44	50.6	54
All other therapists	40	67	.0	.0	27	67.4	32
Writers, artists, and entertainers	1,726	2,138	1.3	1.4	412	23.8	772
Artists and commercial artists	276	354	.2	.2	78	28.3	135
Athletes, coaches, umpires, and related workers	42	49	.0	.0	7	15.5	19
Dancers and choreographers	23	30	.0	.0	7	28.0	12
Designers	342	431	.3	.3	89	26.1	149
Designers, except interior designers	279	351	.2	.2	72	25.7	120
Interior designers	63	80	.0	.1	17	27.5	28
Musicians	274	366	.2	.2	92	33.4	130
Photographers and camera operators	154	180	.1	.1	26	16.9	48
Camera operators, television, motion picture, video	20	23	.0	.0	3	14.5	6
Photographers	134	157	.1	.1	23	17.3	42
Producers, directors, actors, and entertainers	105	130	.1	.1	25	23.6	48
Public relations specialists and publicity writers	110	140	.1	.1	30	27.2	69
Radio and TV announcers and newscasters	52	52	.0	.0	0	–.6	21
Reporters and correspondents	60	58	.0	.0	–2	–3.1	17
Writers and editors, including technical writers	286	347	.2	.2	61	21.2	124
All other professional workers	880	1,104	.7	.7	224	25.5	437
Technicians and related support occupations	4,618	5,558	3.5	3.7	940	20.4	1,927
Health technicians and technologists	2,301	2,872	1.7	1.9	571	24.8	1,011

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
Cardiology technologists	17	23	0.0	0.0	6	34.9	9
Clinical laboratory technologists and technicians	285	328	.2	.2	42	14.9	70
Dental hygienists	133	197	.1	.1	64	48.2	104
Electroneurodiagnostic technologists	6	8	.0	.0	2	24.0	3
EKG technicians	15	11	.0	.0	–4	–24.2	3
Emergency medical technicians	150	217	.1	.1	67	45.1	96
Licensed practical nurses	699	848	.5	.6	148	21.2	296
Medical records technicians	87	132	.1	.1	44	50.9	61
Nuclear medicine technologists	13	15	.0	.0	2	13.3	4
Opticians, dispensing and measuring	67	76	.1	.1	9	14.1	24
Pharmacy technicians	83	92	.1	.1	9	11.1	25
Psychiatric technicians	66	72	.1	.0	6	9.1	15
Radiologic technologists and technicians	174	224	.1	.1	50	28.9	77
Surgical technologists	49	64	.0	.0	15	31.9	25
Veterinary technicians and technologists	27	34	.0	.0	7	27.4	13
All other health professionals and paraprofessionals	430	531	.3	.4	101	23.5	185
Engineering and science technicians and technologists	1,236	1,342	.9	.9	106	8.6	378
Engineering technicians	698	767	.5	.5	70	10.0	228
Electrical and electronic technicians and technologists	297	341	.2	.2	43	14.5	121
All other engineering technicians and technologists	400	427	.3	.3	26	6.6	107
Drafters	310	317	.2	.2	7	2.3	68
Science and mathematics technicians	228	258	.2	.2	29	12.9	82
Technicians, except health and engineering and science	1,082	1,345	.8	.9	263	24.3	538
Aircraft pilots and flight engineers	110	125	.1	.1	15	13.8	38
Air traffic controllers and airplane dispatchers	29	29	.0	.0	0	–.3	8
Broadcast technicians	46	53	.0	.0	7	15.1	20
Computer programmers	568	697	.4	.5	129	22.8	306
Legal assistants and technicians, except clerical	221	310	.2	.2	90	40.7	112
Paralegals	113	189	.1	.1	76	67.7	86
Title examiners and searchers	26	29	.0	.0	3	13.4	6
All other legal assistants, including law clerks	82	92	.1	.1	10	12.1	20
Programmers, numerical, tool, and process control	7	7	.0	.0	0	5.7	2
Technical assistants, library	78	100	.1	.1	22	28.0	44
All other technicians	24	23	.0	.0	0	–2.0	7
Marketing and sales occupations	14,633	16,897	11.1	11.2	2,264	15.5	6,522
Cashiers	3,146	3,677	2.4	2.4	530	16.8	1,902
Counter and rental clerks	374	458	.3	.3	84	22.5	217
Insurance sales workers	409	426	.3	.3	18	4.3	95
Marketing and sales worker supervisors	2,316	2,562	1.7	1.7	246	1.6	618
Real estate agents, brokers, and appraisers	408	441	.3	.3	32	7.9	98
Brokers, real estate	78	89	.1	.1	11	14.1	23
Real estate appraisers	48	54	.0	.0	6	12.1	14
Sales agents, real estate	282	298	.2	.2	16	5.5	61
Salespersons, retail	4,072	4,481	3.1	3.0	408	10.0	1,701
Securities and financial services sales workers	263	363	.2	.2	100	37.8	124
Travel agents	142	176	.1	.1	34	24.0	66
All other sales and related workers	3,503	4,314	2.6	2.9	811	23.2	1,702
Administrative support occupations, including clerical	24,019	25,825	18.1	17.1	1,806	7.5	6,907
Adjusters, investigators, and collectors	1,283	1,605	1.0	1.1	322	25.1	523
Adjustment clerks	401	584	.3	.4	183	45.5	207

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
Bill and account collectors	269	381	0.2	0.3	112	41.8	168
Insurance claims and policy processing occupations	466	526	.4	.3	60	12.9	126
Insurance adjusters, examiners, and investigators	165	203	.1	.1	38	23.1	60
Insurance claims clerks	121	153	.1	.1	31	25.7	48
Insurance policy processing clerks	179	171	.1	.1	–9	–5.0	18
Welfare eligibility workers and interviewers	109	76	.1	.1	–34	–30.8	17
All other adjusters and investigators	38	39	.0	.0	0	1.3	5
Communications equipment operators	328	295	.2	.2	–33	–9.9	70
Telephone operators	319	289	.2	.2	–30	–9.3	68
Central office operators	48	26	.0	.0	–23	–47.0	9
Directory assistance operators	33	18	.0	.0	–16	–47.1	6
Switchboard operators	237	246	.2	.2	9	3.7	53
All other communications equipment operators	9	6	.0	.0	–3	–33.7	2
Computer operators	291	198	.2	.1	–94	–32.1	45
Computer operators, except peripheral equipment	258	181	.2	.1	–77	–29.8	40
Peripheral computer equipment operators	33	17	.0	.0	–17	–50.0	5
Information clerks	1,591	1,958	1.2	1.3	366	23.0	731
Hotel desk clerks	144	174	.1	.1	30	21.0	94
Interviewing clerks, except personnel and social welfare	98	115	.1	.1	17	17.7	46
New accounts clerks, banking	110	115	.1	.1	5	4.5	37
Receptionists and information clerks	1,074	1,392	.8	.9	318	29.7	518
Reservation and transportation ticket agents and travel clerks	166	162	.1	.1	–4	–2.7	38
Mail clerks and messengers	268	291	.2	.2	23	8.6	89
Mail clerks, except mail machine operators and postal service	130	137	.1	.1	7	5.7	40
Messengers	138	154	.1	.1	16	11.3	50
Postal clerks and mail carriers	403	443	.3	.3	40	9.9	134
Postal mail carriers	332	369	.3	.2	37	11.2	117
Postal service clerks	71	74	.1	.0	3	3.8	17
Material recording, scheduling, dispatching, and distributing occupations	3,859	4,084	2.9	2.7	225	5.8	830
Dispatchers	234	258	.2	.2	24	10.1	58
Dispatchers, except police, fire, and ambulance	148	165	.1	.1	17	11.4	38
Dispatchers, police, fire, and ambulance	86	93	.1	.1	7	7.7	19
Meter readers, utilities	55	56	.0	.0	1	2.2	15
Order fillers, wholesale and retail sales	227	255	.2	.2	28	12.1	73
Procurement clerks	56	55	.0	.0	–1	–1.9	8
Production, planning, and expediting clerks	239	254	.2	.2	15	6.3	50
Stock clerks	1,844	1,898	1.4	1.3	54	2.9	326
Traffic, shipping, and receiving clerks	985	1,070	.7	.7	85	8.6	235
Weighers, measurers, checkers, and samplers, recordkeeping	47	50	.0	.0	3	6.1	14
All other material recording, scheduling, and distribution workers	170	188	.1	.1	17	10.3	51
Records processing occupations	3,870	3,887	2.9	2.6	16	.4	891
Advertising clerks	18	18	.0	.0	0	–1.3	4
Brokerage clerks	76	91	.1	.1	15	19.1	22
Correspondence clerks	31	41	.0	.0	10	30.8	16
File clerks	293	315	.2	.2	22	7.4	132
Financial records processing occupations	2,848	2,790	2.2	1.8	–58	–2.0	538
Billing, cost, and rate clerks	335	391	.3	.3	55	16.5	115

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
Billing, posting, and calculating machine operators	102	100	0.1	0.1	–1	–1.4	18
Bookkeeping, accounting, and auditing clerks	2,250	2,147	1.7	1.4	–102	–4.5	379
Payroll and timekeeping clerks	161	151	.1	.1	–10	–5.9	26
Library assistants and bookmobile drivers	125	145	.1	.1	19	15.4	75
Order clerks, materials, merchandise, and service	329	338	.2	.2	8	2.6	75
Personnel clerks, except payroll and timekeeping	124	126	.1	.1	2	1.4	27
Statement clerks	25	25	.0	.0	–1	–2.8	3
Secretaries, stenographers, and typists	4,153	4,081	3.1	2.7	–72	–1.7	834
Secretaries	3,403	3,427	2.6	2.3	25	.7	70
Legal secretaries	284	319	.2	.2	35	12.5	85
Medical secretaries	239	314	.2	.2	76	31.7	117
Secretaries, except legal and medical	2,881	2,794	2.2	1.9	–87	–3.0	501
Stenographers and/or court reporters	98	101	.1	.1	4	3.7	21
Typists, including word processing	653	552	.5	.4	–100	–15.4	111
Other clerical and administrative support workers	7,972	8,983	6.0	6.0	1,011	12.7	2,759
Bank tellers	545	550	.4	.4	5	.8	232
Clerical supervisors and managers	1,369	1,630	1.0	1.1	262	19.1	579
Court clerks	53	57	.0	.0	5	8.7	11
Credit authorizers, credit checkers, and loan and credit clerks	252	256	.2	.2	3	1.3	42
Credit authorizers	16	10	.0	.0	–6	–38.5	2
Credit checkers	42	33	.0	.0	–9	–22.2	3
Loan and credit clerks	181	200	.1	.1	19	10.2	37
Loan interviewers	12	13	.0	.0	1	4.5	2
Customer service representatives, utilities	151	206	.1	.1	55	36.3	85
Data entry keyers, except composing	418	453	.3	.3	35	8.3	55
Data entry keyers, composing	18	10	.0	.0	–8	–44.6	1
Duplicating, mail, and other office machine operators	196	149	.1	.1	–47	–24.1	78
General office clerks	3,111	3,326	2.4	2.2	215	6.9	923
Municipal clerks	22	24	.0	.0	2	9.3	5
Proofreaders and copy markers	26	16	.0	.0	–10	–38.5	7
Real estate clerks	24	25	.0	.0	2	6.4	7
Statistical clerks	78	65	.1	.0	–13	–17.3	13
Teacher aides and educational assistants	981	1,352	.7	.9	370	37.7	500
All other clerical and administrative support workers	727	864	.5	.6	137	18.8	222
Service occupations	21,294	25,147	16.1	16.7	3,853	18.1	10,374
Cleaning and building service occupations, except private household	3,545	3,713	2.7	2.5	168	4.7	868
Institutional cleaning supervisors	108	115	.1	.1	6	5.7	32
Janitors and cleaners, including maids and housekeeping cleaners	3,134	3,262	2.4	2.2	128	4.1	743
Pest controllers and assistants	60	73	.0	.0	13	22.2	24
All other cleaning and building service workers	243	263	.2	.2	20	8.3	68
Food preparation and service occupations	8,396	9,571	6.3	6.3	1,175	14.0	4,792
Chefs, cooks, and other kitchen workers	3,402	3,984	2.6	2.6	583	17.1	1,734
Cooks, except short order	1,344	1,519	1.0	1.0	175	13.0	495
Bakers, bread and pastry	182	231	.1	.2	48	26.4	92
Cooks, institution or cafeteria	435	455	.3	.3	21	4.7	124
Cooks, restaurant	727	833	.5	.6	106	14.6	279
Cooks, short order and fast food	804	978	.6	.6	174	21.6	365

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
Food preparation workers	1,253	1,487	0.9	1.0	234	18.7	873
Food and beverage service occupations	4,766	5,296	3.6	3.5	530	11.1	2,904
Bartenders	390	392	.3	.3	2	.4	152
Dining room and cafeteria attendants and bar helpers	439	501	.3	.3	62	14.1	204
Food counter, fountain, and related workers	1,720	1,963	1.3	1.3	243	14.1	1,251
Hosts and hostesses, restaurant, lounge, or coffee shop	260	278	.2	.2	18	6.7	91
Waiters and waitresses	1,957	2,163	1.5	1.4	206	10.5	1,205
All other food preparation and service workers	228	290	.2	.2	62	27.1	155
Health service occupations	2,167	2,874	1.6	1.9	706	32.6	1,062
Ambulance drivers and attendants, except EMT's	18	25	.0	.0	7	36.5	11
Dental assistants	202	278	.2	.2	77	38.1	126
Medical assistants	225	391	.2	.3	166	74.0	210
Nursing aides and psychiatric aides	1,415	1,757	1.1	1.2	342	24.2	533
Nursing aides, orderlies, and attendants	1,312	1,645	1.0	1.1	333	25.4	510
Psychiatric aides	103	112	.1	.1	9	8.6	23
Occupational therapy assistants and aides	16	26	.0	.0	11	68.7	14
Pharmacy assistants	47	52	.0	.0	5	10.7	14
Physical and corrective therapy assistants and aides	84	151	.1	.1	66	78.6	86
All other health service workers	160	192	.1	.1	33	20.4	69
Personal service occupations	2,750	3,875	2.1	2.6	1,126	40.9	1,622
Amusement and recreation attendants	288	426	.2	.3	138	47.9	191
Baggage porters and bellhops	38	40	.0	.0	2	5.4	9
Barbers	59	54	.0	.0	–6	–9.6	19
Child care workers	830	1,129	.6	.7	299	36.1	391
Cosmetologists and related workers	641	720	.5	.5	78	12.2	249
Hairdressers, hairstylists, and cosmetologists	586	644	.4	.4	58	9.9	214
Manicurists	43	62	.0	.0	19	44.7	31
Shampooers	13	13	.0	.0	1	7.1	4
Flight attendants	132	178	.1	.1	46	35.1	78
Homemaker–home health aides	697	1,247	.5	.8	550	78.8	653
Home health aides	495	873	.4	.6	378	76.5	445
Personal and home care aides	202	374	.2	.2	171	84.7	208
Ushers, lobby attendants, and ticket takers	64	82	.0	.1	18	28.4	30
Private household workers	802	681	.6	.5	–121	–15.1	252
Child care workers, private household	275	250	.2	.2	–25	–9.0	136
Cleaners and servants, private household	505	421	.4	.3	–84	–16.7	111
Cooks, private household	8	3	.0	.0	–5	–62.1	2
Housekeepers and butlers	14	7	.0	.0	–7	–50.7	3
Protective service occupations	2,523	2,980	1.9	2.0	457	18.1	1,162
Firefighting occupations	293	308	.2	.2	16	5.3	128
Fire fighters	225	238	.2	.2	14	6.1	102
Fire fighting and prevention supervisors	54	54	.0	.0	1	1.1	19
Fire inspection occupations	14	16	.0	.0	1	9.2	7
Law enforcement occupations	1,024	1,217	.8	.8	193	18.9	463
Correction officers	320	423	.2	.3	103	32.3	152
Police and detectives	704	793	.5	.5	90	12.7	312
Police and detective supervisors	90	89	.1	.1	–1	–.7	31
Police detectives and investigators	70	75	.1	.0	5	7.8	29
Police patrol officers	413	486	.3	.3	73	17.8	216
Sheriffs and deputy sheriffs	88	96	.1	.1	8	9.3	24
Other law enforcement occupations	43	47	.0	.0	3	7.7	11
Other protective service workers	1,206	1,455	.9	1.0	249	20.6	570
Detectives and investigators,							

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
except public	58	69	0.0	0.0	11	18.5	23
Guards	955	1,175	.7	.8	221	23.1	420
Crossing guards	61	55	.0	.0	–6	–9.2	15
All other protective service workers	133	156	.1	.1	23	17.2	113
All other service workers	1,112	1,453	.8	1.0	341	30.7	615
Agriculture, forestry, fishing, and related occupations	3,785	3,823	2.9	2.5	37	1.0	1,124
Animal caretakers, except farm	130	158	.1	.1	28	21.4	62
Farm operators and managers	1,292	1,175	1.0	.8	–118	–9.1	247
Farmers	1,109	997	.8	.7	–112	–10.1	208
Farm managers	184	178	.1	.1	–6	–3.2	39
Farm workers	873	798	.7	.5	–75	–8.6	241
Fishers, hunters, and trappers	47	37	.0	.0	–10	–20.7	10
Captains and other officers, fishing vessels	8	7	.0	.0	0	–4.4	2
Fishers, hunters, and trappers	39	30	.0	.0	–9	–23.9	8
Forestry and logging occupations	122	123	.1	.1	1	1.0	39
Forest and conservation workers	40	41	.0	.0	1	2.5	15
Timber cutting and logging occupations	82	82	.1	.1	0	.3	25
Fallers and buckers	17	16	.0	.0	–1	–3.5	5
Logging tractor operators	21	22	.0	.0	1	4.4	5
Log handling equipment operators	33	34	.0	.0	1	3.1	11
All other timber cutting and related logging workers	11	10	.0	.0	–1	–10.3	3
Gardening, nursery, and greenhouse and lawn service occupations	925	1,105	.7	.7	180	19.5	398
Gardeners, nursery workers and laborers, landscaping and groundskeeping	817	975	.6	.6	158	19.4	357
Lawn service managers	55	67	.0	.0	12	22.2	19
Nursery and greenhouse managers	10	12	.0	.0	2	19.1	3
Pruners	26	30	.0	.0	4	16.2	11
Sprayers/applicators	18	21	.0	.0	4	21.2	8
Supervisors, farming, forestry, and agricultural related occupations	88	92	.1	.1	4	4.2	21
Veterinary assistants	33	42	.0	.0	9	28.0	18
All other agricultural, forestry, fishing, and related workers	275	293	.2	.2	18	6.5	90
Precision production, craft, and repair occupations	14,446	15,448	10.9	10.2	1,002	6.9	4,350
Blue collar worker supervisors	1,899	1,947	1.4	1.3	48	2.5	467
Construction trades	3,710	4,014	2.8	2.7	304	8.2	1,127
Bricklayers and stone masons	142	162	.1	.1	19	13.6	41
Carpenters	979	1,038	.7	.7	59	6.0	232
Carpet installers	64	72	.0	.0	8	12.2	28
Ceiling tile installers and acoustical carpenters	16	18	.0	.0	1	8.7	4
Concrete and terrazzo finishers	137	147	.1	.1	10	7.4	45
Drywall installers and finishers	133	140	.1	.1	7	4.9	47
Electricians	575	627	.4	.4	52	9.1	173
Glaziers	36	38	.0	.0	2	5.3	10
Hard tile setters	29	30	.0	.0	1	4.1	8
Highway maintenance workers	171	158	.1	.1	–14	–7.9	45
Insulation workers	65	78	.0	.1	13	19.3	28
Painters and paperhangers, construction and maintenance	444	509	.3	.3	66	14.8	164
Paving, surfacing, and tamping equipment operators	79	103	.1	.1	24	29.9	41
Pipelayers and pipelaying fitters	62	66	.0	.0	4	5.7	20
Plasterers	32	36	.0	.0	4	13.3	11
Plumbers, pipefitters, and steamfitters	389	406	.3	.3	18	4.5	102
Roofers	138	144	.1	.1	6	4.3	47
Structural and reinforcing metal workers	67	73	.1	.0	6	9.0	22

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
All other construction trades workers	150	169	0.1	0.1	19	12.5	58
Extractive and related workers, including blasters	220	220	.2	.1	0	–.1	61
Oil and gas extraction occupations	65	53	.0	.0	–13	–19.2	13
Roustabouts	28	18	.0	.0	–9	–33.7	6
All other oil and gas extraction occupations	37	34	.0	.0	–3	–8.4	7
Mining, quarrying, and tunneling occupations	16	12	.0	.0	–4	–25.8	3
All other extraction and related workers	138	155	.1	.1	17	12.0	44
Mechanics, installers, and repairers	5,233	5,889	4.0	3.9	656	12.5	1,905
Communications equipment mechanics, installers, and repairers	116	121	.1	.1	5	4.3	29
Central office and PBX installers and repairers	81	85	.1	.1	4	5.2	21
Radio mechanics	8	7	.0	.0	–1	–7.2	2
All other communications equipment mechanics, installers, and repairers	27	28	.0	.0	1	5.1	7
Electrical and electronic equipment mechanics, installers, and repairers	562	627	.4	.4	66	11.7	2
Data processing equipment repairers	80	121	.1	.1	42	52.3	67
Electrical powerline installers and repairers	108	111	.1	.1	3	3.0	25
Electronic home entertainment equipment repairers	33	27	.0	.0	–6	–19.0	7
Electronics repairers, commercial and industrial equipment	60	67	.0	.0	7	11.8	19
Station installers and repairers, telephone	37	10	.0	.0	–27	–73.5	7
Telephone and cable TV line installers and repairers	201	242	.2	.2	41	20.5	82
All other electrical and electronic equipment mechanics, installers, and repairers	44	50	.0	.0	6	13.0	15
Machinery and related mechanics, installers, and repairers	1,899	2,173	1.4	1.4	274	14.4	670
Industrial machinery mechanics	459	489	.3	.3	30	6.6	131
Maintenance repairers, general utility	1,362	1,608	1.0	1.1	246	18.0	522
Millwrights	78	76	.1	.1	–2	–2.2	18
Vehicle and mobile equipment mechanics and repairers	1,597	1,764	1.2	1.2	168	10.5	578
Aircraft mechanics, including engine specialists	137	155	.1	.1	18	13.2	50
Aircraft engine specialists	25	27	.0	.0	2	8.9	8
Aircraft mechanics	112	128	.1	.1	16	14.2	42
Automotive body and related repairers	225	254	.2	.2	29	12.8	98
Automotive mechanics	775	871	.6	.6	96	12.4	298
Bus and truck mechanics and diesel engine specialists	266	288	.2	.2	22	8.2	78
Farm equipment mechanics	44	37	.0	.0	–7	–15.9	10
Mobile heavy equipment mechanics	104	111	.1	.1	7	6.5	30
Motorcycle, boat, and small engine mechanics	45	49	.0	.0	3	7.1	15
Motorcycle repairers	12	13	.0	.0	1	5.7	4
Small engine specialists	34	36	.0	.0	3	7.6	11
Other mechanics, installers, and repairers	1,060	1,203	.8	.8	143	13.5	403
Bicycle repairers	13	17	.0	.0	4	33.5	7
Camera and photographic equipment repairers	14	18	.0	.0	3	24.0	7
Coin and vending machine servicers and repairers	21	19	.0	.0	–1	–6.5	4
Electric meter installers and repairers	12	8	.0	.0	–4	–33.7	3
Electromedical and biomedical equipment							

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
repairers	10	11	0.0	0.0	1	11.7	3
Elevator installers and repairers	25	27	.0	.0	2	8.0	8
Heat, air conditioning, and refrigeration mechanics and installers	256	300	.2	.2	44	17.0	104
Home appliance and power tool repairers	71	73	.1	.0	2	3.5	20
Locksmiths and safe repairers	25	29	.0	.0	4	15.0	10
Musical instrument repairers and tuners	9	10	.0	.0	1	7.4	3
Office machine and cash register servicers	62	73	.0	.0	11	17.8	28
Precision instrument repairers	38	38	.0	.0	–1	–2.2	10
Riggers	9	8	.0	.0	–2	–18.3	2
Tire repairers and changers	94	101	.1	.1	7	7.0	44
Watchmakers	7	7	.0	.0	0	–5.1	2
All other mechanics, installers, and repairers	394	467	.3	.3	73	18.4	149
Production occupations, precision	3,054	3,016	2.3	2.0	–38	–1.2	680
Assemblers, precision	380	383	.3	.3	3	.7	93
Aircraft assemblers, precision	25	27	.0	.0	2	9.9	7
Electrical and electronic equipment assemblers, precision	194	193	.1	.1	–1	–.6	47
Electromechanical equipment assemblers, precision	51	51	.0	.0	0	.6	13
Fitters, structural metal, precision	15	12	.0	.0	–3	–18.3	3
Machine builders and other precision machine assemblers	57	58	.0	.0	1	1.6	12
All other precision assemblers	38	41	.0	.0	3	8.2	11
Food workers, precision	299	301	.2	.2	2	.6	93
Bakers, manufacturing	44	47	.0	.0	3	7.0	13
Butchers and meatcutters	217	205	.2	.1	–12	–5.7	57
All other precision food and tobacco workers	38	49	.0	.0	11	29.3	22
Inspectors, testers, and graders, precision	634	610	.5	.4	–24	–3.8	115
Metal workers, precision	934	924	.7	.6	–10	–1.1	195
Boilermakers	18	18	.0	.0	–1	–3.2	4
Jewelers and silversmiths	32	31	.0	.0	–1	–1.7	6
Machinists	386	384	.3	.3	–2	–.5	85
Sheet metal workers and duct installers	237	236	.2	.2	–1	–.4	50
Shipfitters	9	9	.0	.0	0	–.6	2
Tool and die makers	134	124	.1	.1	–9	–7.0	21
All other precision metal workers	117	120	.1	.1	3	2.9	27
Printing workers, precision	141	124	.1	.1	–17	–12.1	44
Bookbinders	4	4	.0	.0	–1	–15.0	1
Prepress printing workers, precision	123	106	.1	.1	–16	–13.4	41
Compositors and typesetters, precision	6	3	.0	.0	–3	–50.3	1
Job printers	15	15	.0	.0	1	4.9	3
Paste-up workers	15	4	.0	.0	–11	–75.0	2
Desktop publishing specialists	30	53	.0	.0	22	73.5	27
Photoengravers	5	3	.0	.0	–2	–35.8	1
Camera operators	11	10	.0	.0	–2	–14.9	2
Film strippers, printing	26	7	.0	.0	–20	–75.0	4
Platemakers	14	12	.0	.0	–2	–15.1	2
All other printing workers, precision	13	14	.0	.0	0	1.1	2
Textile, apparel, and furnishings workers, precision	230	212	.2	.1	–18	–7.7	34
Custom tailors and sewers	87	73	.1	.0	–15	–16.7	11
Patternmakers and layout workers, fabric and apparel	14	14	.0	.0	0	–3.3	2
Shoe and leather workers and repairers, precision	21	17	.0	.0	–4	–20.1	2
Upholsterers	57	57	.0	.0	0	.4	8

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
All other precision textile, apparel, and furnishings workers	50	51	0.0	0.0	1	2.8	12
Woodworkers, precision	229	249	.2	.2	19	8.4	48
Cabinetmakers and bench carpenters	121	128	.1	.1	7	6.1	19
Furniture finishers	30	33	.0	.0	3	11.5	9
Wood machinists	45	51	.0	.0	6	13.9	11
All other precision woodworkers	33	36	.0	.0	2	6.8	9
Other precision workers	206	213	.2	.1	7	3.3	57
Dental laboratory technicians, precision	47	48	.0	.0	0	.7	12
Optical goods workers, precision	19	19	.0	.0	0	.4	4
Photographic process workers, precision	14	14	.0	.0	0	–2.7	5
All other precision workers	126	133	.1	.1	7	5.4	36
Plant and system occupations	330	362	.2	.2	32	9.9	110
Chemical plant and system operators	36	36	.0	.0	0	–.8	9
Electric power generating plant operators, distributors, and dispatchers	47	49	.0	.0	2	4.3	14
Power distributors and dispatchers	15	15	.0	.0	–1	–3.7	4
Power generating and reactor plant operators	31	34	.0	.0	3	8.3	10
Gas and petroleum plant and system occupations	33	29	.0	.0	–3	–10.5	8
Stationary engineers	27	26	.0	.0	–2	–5.9	5
Water and liquid waste treatment plant and system operators	98	121	.1	.1	23	23.2	38
All other plant and system operators	88	101	.1	.1	13	14.8	35
Operators, fabricators, and laborers	17,843	19,365	13.5	12.8	1,522	8.5	5,900
Machine setters, set-up operators, operators, and tenders	4,898	4,956	3.7	3.3	58	1.2	1,378
Numerical control machine tool operators and tenders, metal and plastic	92	117	.1	.1	25	27.4	42
Combination machine tool setters, set-up operators, operators, and tenders	96	113	.1	.1	17	17.8	34
Machine tool cut and form setters, operators, and tenders, metal and plastic	723	677	.5	.4	–46	–6.4	174
Drilling and boring machine tool setters and set-up operators, metal and plastic	46	36	.0	.0	–10	–22.0	8
Grinding machine setters and set-up operators, metal and plastic	63	56	.0	.0	–7	–11.4	14
Lathe and turning machine tool setters and set-up operators, metal and plastic	71	61	.1	.0	–10	–13.7	13
Machine forming operators and tenders, metal and plastic	174	168	.1	.1	–6	–3.2	51
Machine tool cutting operators and tenders, metal and plastic	127	105	.1	.1	–22	–17.4	25
Punching machine setters and set-up operators, metal and plastic	51	47	.0	.0	–4	–8.3	10
All other machine tool setters, set-up operators, metal and plastic	191	204	.1	.1	13	6.7	53
Metal fabricating machine setters, operators, and related workers	157	162	.1	.1	5	3.3	42
Metal fabricators, structural metal products	46	50	.0	.0	5	10.6	13
Soldering and brazing machine operators and tenders	11	11	.0	.0	0	.6	3
Welding machine setters, operators, and tenders	100	101	.1	.1	0	.3	26
Metal and plastic processing machine setters, operators, and related workers	466	528	.4	.3	62	13.4	198
Electrolytic plating machine operators and tenders, setters and set-up							

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
operators, metal and plastic	42	46	0.0	0.0	4	10.4	17
Foundry mold assembly and shakeout workers	10	10	.0	.0	0	–4.0	3
Furnace operators and tenders	21	20	.0	.0	–1	–4.6	3
Heat treating machine operators and tenders, metal and plastic	21	20	.0	.0	–1	–3.7	6
Metal molding machine operators and tenders, setters and set-up operators	45	49	.0	.0	4	9.1	17
Plastic molding machine operators and tenders, setters and set-up operators	183	216	.1	.1	34	18.3	87
All other metal and plastic machine setters, operators, and related workers	144	167	.1	.1	23	15.6	65
Printing, binding, and related workers	383	394	.3	.3	11	2.9	81
Bindery machine operators and set-up operators	81	85	.1	.1	4	4.9	16
Prepress printing workers, production	19	8	.0	.0	–11	–56.2	3
Photoengraving and lithographic machine operators and tenders	6	5	.0	.0	–1	–9.5	1
Typesetting and composing machine operators and tenders	14	3	.0	.0	–10	–75.1	2
Printing press operators	215	226	.2	.1	11	5.0	45
Letterpress operators	14	9	.0	.0	–5	–34.8	2
Offset lithographic press operators	76	80	.1	.1	4	5.9	15
Printing press machine setters, operators and tenders	119	129	.1	.1	10	8.6	27
All other printing press setters and set-up operators	6	7	.0	.0	1	14.4	2
Screen printing machine setters and set-up operators	29	31	.0	.0	2	6.1	6
All other printing, binding, and related workers	38	44	.0	.0	5	14.0	11
Textile and related setters, operators, and related workers	933	777	.7	.5	–156	–16.7	164
Extruding and forming machine operators and tenders, synthetic or glass fibers	22	24	.0	.0	2	9.7	6
Pressing machine operators and tenders, textile, garment, and related materials	78	80	.1	.1	3	3.5	19
Sewing machine operators, garment	453	334	.3	.2	–118	–26.1	73
Sewing machine operators, non–garment	130	128	.1	.1	–2	–1.9	21
Textile bleaching and dyeing machine operators and tenders	26	28	.0	.0	3	10.0	7
Textile draw–out and winding machine operators and tenders	183	155	.1	.1	–28	–15.4	31
Textile machine setters and set-up operators	41	27	.0	.0	–14	–34.4	7
Woodworking machine setters, operators, and other related workers	130	118	.1	.1	–12	–9.0	31
Head sawyers and sawing machine operators and tenders, setters and set-up operators	66	59	.0	.0	–6	–9.7	16
Woodworking machine operators and tenders, setters and set-up operators	64	59	.0	.0	–5	–8.3	14
Other machine setters, set-up operators, operators, and tenders	1,919	2,070	1.5	1.4	151	7.9	612
Boiler operators and tenders, low pressure	17	14	.0	.0	–4	–20.7	3

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
Cement and gluing machine operators and tenders	35	30	0.0	0.0	–5	–15.5	9
Chemical equipment controllers, operators and tenders	79	82	.1	.1	3	4.4	23
Cooking and roasting machine operators and tenders, food and tobacco	30	32	.0	.0	2	7.7	9
Crushing and mixing machine operators and tenders	145	144	.1	.1	0	–.3	36
Cutting and slicing machine setters, operators and tenders	95	103	.1	.1	8	8.3	30
Dairy processing equipment operators, including setters	13	12	.0	.0	–2	–13.0	3
Electronic semiconductor processors	58	65	.0	.0	7	12.3	18
Extruding and forming machine setters, operators and tenders	107	106	.1	.1	–1	–1.3	27
Furnace, kiln, or kettle operators and tenders	28	25	.0	.0	–3	–9.3	4
Laundry and drycleaning machine operators and tenders, except pressing	180	219	.1	.1	39	21.9	83
Motion picture projectionists	8	5	.0	.0	–4	–45.1	2
Packaging and filling machine operators and tenders	354	410	.3	.3	56	15.8	121
Painting and coating machine operators	171	185	.1	.1	14	8.4	56
Coating, painting, and spraying machine operators, tenders, setters, and set-up operators	122	127	.1	.1	5	4.1	35
Painters, transportation equipment	49	58	.0	.0	9	18.9	21
Paper goods machine setters and set-up operators	51	44	.0	.0	–7	–14.5	12
Photographic processing machine operators and tenders	49	53	.0	.0	4	8.0	21
Separating and still machine operators and tenders	19	17	.0	.0	–1	–6.0	5
Shoe sewing machine operators and tenders	11	6	.0	.0	–5	–41.7	2
Tire building machine operators	14	12	.0	.0	–2	–15.0	3
All other machine operators, tenders, setters, and set-up operators	454	504	.3	.3	51	11.1	144
Hand workers, including assemblers and fabricators	2,813	2,898	2.1	1.9	85	3.0	671
Cannery workers	66	62	.0	.0	–5	–6.8	12
Coil winders, tapers, and finishers	22	21	.0	.0	–1	–3.2	5
Cutters and trimmers, hand	46	48	.0	.0	2	3.9	13
Electrical and electronic assemblers	229	226	.2	.1	–3	–1.5	48
Grinders and polishers, hand	74	72	.1	.0	–1	–2.0	9
Machine assemblers	59	57	.0	.0	–2	–3.6	12
Meat, poultry, and fish cutters and trimmers, hand	151	186	.1	.1	35	23.0	72
Painting, coating, and decorating workers, hand	31	34	.0	.0	3	10.3	11
Pressers, hand	14	13	.0	.0	–2	–12.4	2
Sewers, hand	13	13	.0	.0	0	.9	2
Solderers and brazers	26	32	.0	.0	5	20.7	12
Welders and cutters	352	384	.3	.3	32	9.0	122
All other assemblers, fabricators, and hand workers	1,729	1,751	1.3	1.2	22	1.3	351
Transportation and material moving machine and vehicle operators	5,157	5,857	3.9	3.9	699	13.6	1,559
Motor vehicle operators	3,775	4,344	2.9	2.9	569	15.1	1,129
Bus drivers	592	710	.4	.5	117	19.8	197
Bus drivers, except school	167	192	.1	.1	24	14.6	47

See footnotes at end of table.

Table 2. Continued—Employment by occupation, 1996 and projected 2006

(Numbers in thousands of jobs)

Occupation	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]
	Number		Percent distribution		Number	Percent	
	1996	2006	1996	2006			
Bus drivers, school	425	518	0.3	0.3	93	21.8	150
Taxi drivers and chauffeurs	106	114	.1	.1	8	7.6	24
Truck drivers	3,050	3,492	2.3	2.3	442	14.5	903
Driver/sales workers	331	370	.3	.2	39	11.6	119
Truck drivers light and heavy	2,719	3,123	2.1	2.1	404	14.9	784
All other motor vehicle operators	27	28	.0	.0	1	3.3	5
Rail transportation workers	83	79	.1	.1	–4	–4.7	21
Locomotive engineers	21	23	.0	.0	2	7.1	6
Railroad brake, signal, and switch operators	18	13	.0	.0	–5	–28.2	4
Railroad conductors and yardmasters	25	25	.0	.0	0	–1.8	6
Rail yard engineers, dinkey operators, and hostlers	5	4	.0	.0	–1	–19.6	1
Subway and streetcar operators	13	14	.0	.0	1	9.2	4
Water transportation and related workers	51	49	.0	.0	–2	–3.8	19
Able seamen, ordinary seamen, and marine oilers	22	20	.0	.0	–1	–6.2	8
Captains and pilots, ship	14	13	.0	.0	0	–1.6	5
Mates, ship, boat, and barge	7	7	.0	.0	0	2.4	3
Ship engineers	9	8	.0	.0	–1	–6.6	3
Material moving equipment operators	1,097	1,212	.8	.8	114	10.4	338
Crane and tower operators	45	45	.0	.0	0	–1.1	8
Excavation and loading machine operators	97	107	.1	.1	10	10.5	28
Grader, bulldozer, and scraper operators	107	111	.1	.1	5	4.3	14
Hoist and winch operators	9	10	.0	.0	0	4.8	3
Industrial truck and tractor operators	479	536	.4	.4	57	11.9	156
Operating engineers	157	180	.1	.1	23	14.4	57
All other material moving equipment operators	202	222	.2	.1	20	9.7	72
All other transportation and material moving equipment operators	151	173	.1	.1	22	14.5	52
Helpers, laborers, and material movers, hand	4,975	5,654	3.8	3.7	679	13.7	2,292
Freight, stock, and material movers, hand	808	849	.6	.6	41	5.1	333
Hand packers and packagers	986	1,208	.7	.8	222	22.5	485
Helpers, construction trades	546	596	.4	.4	49	9.0	245
Machine feeders and offbearers	265	263	.2	.2	–2	–.8	69
Parking lot attendants	68	86	.1	.1	18	26.2	30
Refuse collectors	116	123	.1	.1	7	6.0	52
Service station attendants	174	174	.1	.1	0	.1	69
Vehicle washers and equipment cleaners	274	343	.2	.2	69	25.2	149
All other helpers, laborers, and material movers, hand	1,737	2,012	1.3	1.3	275	15.8	862

[1] Total job openings represent the sum of employment increases and net replacements. If employment change is negative, job openings due to growth are zero and total job openings equal net replacements.

services and individual and miscellaneous social services industries. These occupations were the two fastest growing occupations in the previous 10-year period. Home health aides provide personal and physical care for an increasing number of elderly people and for patients who are recovering from surgery and other serious health conditions. Personal and home care aides perform a variety of light housekeeping tasks for those in need of home care.

Employment of physical therapists and physical and corrective therapy assistants and aides is expected to grow rapidly in the coming period, due to the increased use of new medical technologies that treat the kinds of life-threatening and disabling conditions requiring these services. Another factor is the aging population, whose members are particularly vulnerable to chronic and debilitating conditions requiring therapeutic services. The group occupational therapists and occupational therapy assistants and aides also is expected to increase due to medical advances that are expected to make

it possible for more patients with critical problems to survive. These workers help individuals with mentally, physically, developmentally, or emotionally disabling conditions to develop, recover, or maintain daily living and work skills.

Employment of medical records technicians is expected to grow rapidly despite slower-than-average growth in the hospital industry, which employs the majority of these workers. Growth will be due to the need to maintain records for an increasing number of medical tests, treatments, and procedures that will undergo increasing scrutiny by third-party payers, courts, and consumers. Employment of medical assistants is expected to be driven by the increase in the number of group and other health care practices that use support personnel. These workers are employed primarily in outpatient settings, which are projected to grow rapidly.

The demand for dental hygienists is expected to be spurred by the growth in the population and the growing awareness of the need for preventive dental care. Projected rapid growth in the employment of physician's assistants stems from an anticipated expansion of the health services industry and an emphasis on cost containment. Employment of emergency medical technicians is projected to grow rapidly as a result of

Table 3. Fastest growing occupations, 1996–2006

(Numbers in thousands of jobs)

Occupation	Employment		Change		Quartile rank by 1996 median weekly earnings of full-time workers[1]	Education and training category
	1996	2006	Number	Percent		
Database administrators, computer support specialists, and all other computer scientists	212	461	249	118	1	Bachelor's degree
Computer engineers	216	451	235	109	1	Bachelor's degree
Systems analysts	506	1,025	520	103	1	Bachelor's degree
Personal and home care aides	202	374	171	85	4	Short-term on-the-job training
Physical and corrective therapy assistants and aides	84	151	66	79	4	Moderate-term on-the-job training
Home health aides	495	873	378	76	4	Short-term on-the-job training
Medical assistants	225	391	166	74	3	Moderate-term on-the-job training
Desktop publishing specialists	30	53	22	74	2	Long-term on-the-job training
Physical therapists	115	196	81	71	1	Bachelor's degree
Occupational therapy assistants and aides	16	26	11	69	3	Moderate-term on-the-job training
Paralegals	113	189	76	68	2	Associate's degree
Occupational therapists	57	95	38	66	1	Bachelor's degree
Teachers, special education	407	648	241	59	1	Bachelor's degree
Human services workers	178	276	98	55	4	Moderate-term on-the-job training
Data processing equipment repairers	80	121	42	52	2	Postsecondary vocational training
Medical records technicians	87	132	44	51	2	Associate's degree
Speech-language pathologists and audiologists	87	131	44	51	1	Master's degree
Dental hygienists	133	197	64	48	1	Associate's degree
Amusement and recreation attendants	288	426	138	48	3	Short-term on-the-job training
Physician assistants	64	93	30	47	1	Bachelor's degree
Respiratory therapists	82	119	37	46	1	Associate's degree
Adjustment clerks	401	584	183	46	3	Short-term on-the-job training
Engineering, science, and computer systems managers	343	498	155	45	1	Work experience plus bachelor's and/or higher degree
Emergency medical technicians	150	217	67	45	3	Postsecondary vocational training
Manicurists	43	62	19	45	4	Postsecondary vocational training
Bill and account collectors	269	381	112	42	3	Short-term on-the-job training
Residential counselors	180	254	74	41	1	Bachelor's degree
Instructors and coaches, sports and physical training	303	427	123	41	2	Moderate-term on-the-job training
Dental assistants	202	278	77	38	3	Moderate-term on-the-job training
Securities and financial services sales workers	263	363	100	38	1	Bachelor's degree

[1]The quartile rankings are presented in the following four categories, each representing the appropriate quartile from high to low: 1 = very high, 2 = high, 3 = low, 4 = very low. The rankings were based on quartiles using one-fourth of total employment to define each quartile.

SOURCE: Current Population Survey.

Table 4. Occupations with the largest job growth, 1996–2006

(Numbers in thousands of jobs)

Occupation	Employment		Change		Quartile rank by 1996 median weekly earnings of full-time workers[1]	Education and training category
	1996	2006	Number	Percent		
Cashiers	3,146	3,677	530	17	4	Short-term on-the-job training
Systems analysts	506	1,025	520	103	1	Bachelor's degree
General managers and top executives	3,210	3,677	467	15	1	Work experience plus bachelor's or higher degree
Registered nurses	1,971	2,382	411	21	1	Associate's degree
Salespersons, retail	4,072	4,481	408	10	3	Short-term on-the-job training
Truck drivers light and heavy	2,719	3,123	404	15	2	Short-term on-the-job training
Home health aides	495	873	378	76	4	Short-term on-the-job training
Teacher aides and educational assistants	981	1,352	370	38	4	Short-term on-the-job training
Nursing aides, orderlies, and attendants	1,312	1,645	333	25	4	Short-term on-the-job training
Receptionists and information clerks	1,074	1,392	318	30	4	Short-term on-the-job training
Teachers, secondary school	1,406	1,718	312	22	1	Bachelor's degree
Child care workers	830	1,129	299	36	4	Short-term on-the-job training
Clerical supervisors and managers	1,369	1,630	262	19	2	Work experience in a related occupation
Database administrators, computer support specialists, and all other computer scientists	212	461	249	118	1	Bachelor's degree
Marketing and sales worker supervisors	2,316	2,562	246	11	2	Work experience in a related occupation
Maintenance repairers, general utility	1,362	1,608	246	18	2	Short-term on-the-job training
Food counter, fountain, and related workers	1,720	1,963	243	14	4	Short-term on-the-job training
Teachers, special education	407	648	241	59	1	Bachelor's degree
Computer engineers	216	451	235	109	1	Bachelor's degree
Food preparation workers	1,253	1,487	234	19	4	Short-term on-the-job training
Hand packers and packagers	986	1,208	222	23	4	Short-term on-the-job training
Guards	955	1,175	221	23	3	Short-term on-the-job training
General office clerks	3,111	3,326	215	7	3	Short-term on-the-job training
Waiters and waitresses	1,957	2,163	206	11	4	Short-term on-the-job training
Social workers	585	772	188	32	2	Bachelor's degree
Adjustment clerks	401	584	183	46	3	Short-term on-the-job training
Cooks, short order and fast food	804	978	174	22	4	Short-term on-the-job training
Personal and home care aides	202	374	171	85	4	Short-term on-the-job training
Food service and lodging managers	589	757	168	28	2	Work experience in a related occupation
Medical assistants	225	391	166	74	3	Moderate-term on-the-job training

[1] The quartile rankings are presented in the following four categories, each representing the appropriate quartile from high to low: 1 = very high, 2 = high, 3 = low, 4 = very low. The rankings were based on quartiles using one-fourth of total employment to define each quartile.

SOURCE: Current Population Survey.

an expanding population—especially among the elderly—and the expectation that States will permit these workers to perform primary care on the scene without transporting the patient to a medical facility.

Other health-related occupations in which employment is projected to grow rapidly include human services workers (many of whom work in social services and State and local governments); respiratory therapists; cardiology technologists; and speech-language pathologists and audiologists.

The remaining fast-growing occupations reflect a diversity of specialties. Paralegals are expected to be in great demand in legal and related fields due to efforts to provide more cost-effective legal services to the public. This occupation grew even more rapidly during the 1986–96 period. The number of special education teachers is expected to grow due to legislation requiring training and employment for individuals with disabilities and to growing public interest in people with special needs. The majority of residential counselors are employed in the very rapidly growing residential care industry, which provides social and personal care for children, the aged, and others with limited ability for self-care. The employment of adjustment clerks is projected to grow at a rapid

pace as business establishments put added emphasis on maintaining good customer relations, by resolving consumer complaints in a friendly and timely fashion. Finally, the number of jobs for bill and account collectors will rise as consumer debt continues to increase and firms strive to keep loses at a minimum.

Occupations with the largest job growth. In addition to the growth rate, employment size is an important factor in determining the numerical growth in the occupation. Most of the occupations with the largest projected job growth are concentrated in four industry sectors that are expected to account for nearly two-thirds of the total growth in wage and salary jobs from 1996 to 2006: retail trade, business services, health services, and educational services. (See table 4). Within retail trade, employment is projected to grow substantially for marketing and sales worker supervisors; salespersons, retail; cashiers; waiters and waitresses; food preparation workers; food counter, fountain, and related workers; cooks, short order and fast food; and food service and lodging managers. Except for the last two categories, each of these groups grew significantly faster and had larger numerical increases over the 1986–96 period than is projected for the 1996–2006 period.

The business services sector also is expected to contribute significantly to the future job growth of several occupations. As mentioned in the discussion of the fastest growing jobs, the computer services and data processing industry is expected to generate numerous future opportunities for systems analysts; computer engineers; and database administrators, computer support specialists, and all other computer scientists. Other growth occupations within business services include general managers and top executives; clerical supervisors and managers; and janitors and cleaners, including maids and housekeeping cleaners. The latter occupation is expected to benefit from the growing trend throughout industry to contract out for cleaning services.

The health services sector is expected to provide numerous opportunities for registered nurses; nursing aides, orderlies, and attendants; medical assistants; home health aides; and personal and home care aides. (The last two also are on the list of the fastest growing occupations.) Of the occupations in this group, only registered nurses and home health aides were also on the list of the 30 occupations with the largest job growth during the 1986–96.

The public and private education industry is projected to provide large employment increases for secondary school teachers; teacher aides and educational assistants; and special education teachers. The remaining occupations listed in table 4 are found in a wide variety of industries throughout the economy, and their growth, as a consequence, is dependent upon many factors. Jobs for receptionists and information clerks, for example, are projected to increase significantly because such workers interact a great deal with people and their duties are difficult to automate.

Employment among child care workers, which experienced a very large increase in jobs from 1986 to 1996, is expected to continue growing significantly through 2006, as a result of anticipated growth in the number of young children as well as a change in the type of child care arrangements parents may choose. The trend toward formal institutional child care and away from informal arrangements with family or friends is expected to continue in the coming period. Other very large occupations that are projected to provide numerous additional jobs include truckdrivers, light and heavy; maintenance repairers, general utility; adjustment clerks; social workers; and hand packers and packagers.

Declining occupations. Projected declines in industry employment and changes in occupational staffing patterns will contribute to reduced demand for workers in several occupations over the 1996–2006 period. (See table 5.) This section of the article focuses on those occupations with the largest *numerical* job declines rather than on those with the fastest *rates* of decline. Many detailed occupations in the latter category are very small and, consequently, the resulting employment declines are not very significant.

Industry employment change is the major cause of projected employment declines for farmers; sewing machine operators, garment; textile draw-out and winding machine operators and tenders; textile machine setters and set-up operators; electrical and electronic equipment assemblers, precision; and child care workers and cleaners and servants, both of which are in the private household industry. Declining occupations that are expected to be affected almost equally by industry employment changes and by occupational structure changes include farmworkers and the following occupations in the telephone industry: station installers and repairers; central office operators; and directory assistance operators.

Most of the other declining occupations are affected more by occupational structure changes, which are the result of technological advances, organizational changes, and other factors that affect the demand for workers, than by industry employment changes. The number of typists and word processors is expected to decline by 100,000 across all industries because of productivity improvements resulting from office automation and the increased use of word processing equipment by professional and managerial employees. The employment decline for these workers was much sharper over the 1986–96 period—nearly 330,000 jobs. Employment of payroll and timekeeping clerks is projected to continue its long-term decline, but at a much slower rate than in the previous period.

Several other occupations, all of which registered employment increases in the 1980s, are projected to decline through

Table 5. Occupations with the largest job decline, 1996–2006

(Numbers in thousands of jobs)

Occupation	Employment		Change	
	1996	2006	Number	Percent
Sewing machine operators, garment	453	334	–118	–26
Farmers	1,109	997	–112	–10
Bookkeeping, accounting, and auditing clerks	2,250	2,147	–102	–5
Typists, including word processing	653	552	–100	–15
Secretaries, except legal and medical	2,881	2,794	–87	–3
Cleaners and servants, private household	505	421	–84	–17
Computer operators, except peripheral equipment	258	181	–77	–30
Farm workers	873	798	–75	–9
Duplicating, mail, and other office machine operators	196	149	–47	–24
Welfare eligibility workers and interviewers	109	76	–34	–31
Textile draw-out and winding machine operators and tenders	183	155	–28	–15
Station installers and repairers, telephone	37	10	–27	–74
Child care workers, private household	275	250	–25	–9
Inspectors, testers, and graders, precision	634	610	–24	–4
Central office operators	48	26	–23	–47
Machine tool cutting operators and tenders, metal and plastic	127	105	–22	–17
Film strippers, printing	26	7	–20	–75
Peripheral computer equipment operators	33	17	–17	–50
Directory assistance operators	33	18	–16	–47
Custom tailors and sewers	87	73	–15	–17
Textile machine setters and set-up operators	41	27	–14	–34
Highway maintenance workers	171	158	–14	–8
Statistical clerks	78	65	–13	–17
Butchers and meatcutters	217	205	–12	–6
Paste-up workers	15	4	–11	–75
Typesetting and composing machine operators and tenders	14	3	–10	–75
Drilling and boring machine tool setters and set-up operators, metal and plastic	46	36	–10	–22
Proofreaders and copy markers	26	16	–10	–38
Lathe and turning machine tool setters and set-up operators, metal and plastic	71	61	–10	–14
Payroll and timekeeping clerks	161	151	–10	–6

2006 due to a much greater impact of office automation. These include bookkeeping, accounting, and auditing clerks; duplicating, mail, and other office machine operators; secretaries, except legal and medical; general office clerks; and statistical clerks. The demand for computer operators, except peripheral equipment, which increased somewhat modestly from 1986 to 1996, is expected to fall because these employees work primarily with large mainframe computer systems—the part of the overall computer market that is projected to slow down.

Employment among peripheral computer equipment operators is expected to continue its long-term decline through 2006. Typesetting and composing machine operators and tenders; film strippers; and paste-up workers (employed in the printing industry), are expected to be adversely impacted by the proliferation of desktop publishing technology, which uses computers to develop page layout and design. Technological improvements in this industry also will adversely affect proofreaders and copy markers. The installation of computer controlled technology in other manufacturing industries, including advanced systems that combine production tasks and link machines, will reduce the demand for lathe and turning machine setters and set-up operators, metal and plastic; and drilling and boring machine tool setters and set-up operators, metal and plastic.

Total job openings

In addition to occupational employment growth, another aspect of the demand for workers is the need to replace workers who leave their jobs to enter other occupations, retire, or leave the labor force for other reasons. Job openings resulting from replacement needs are very important because, in most occupations, they exceed those resulting from employment growth. Even occupations that are projected to decline provide some job openings. (See table 2.)

The measurement of replacement needs is very complex because of the continuous movement of workers into and out of occupations. The measure used in this article is based on the net change in employment (entrants minus separations) in each age cohort over the projection period. Consequently, net replacements do not measure all workers who leave an occupation, nor do they represent the total number of jobs that will be filled due to the need to replace workers. These net replacements understate the total number of job openings in an occupation because they relate only to the difference between the number of experienced workers who enter and the number who leave that occupation. However, net replacements are used in this article because the mea-

sure best represents the job openings for new labor force entrants over the projection period.[4]

Over the 1996–2006 period, more job openings are expected to result from replacement needs (32.0 million) than from employment growth in the economy (18.6 million). However, this pattern differs for the professional specialty occupations group, which has the fastest rate of growth among the major groups, and for many detailed occupations that are projected to grow more rapidly than average. In contrast, for the major occupational groups that are projected to grow more slowly than average—administrative support occupations, including clerical; precision production, craft, and repair occupations; operators, fabricators, and laborers; and farming, forestry, and fishing occupations—the number of job openings attributable to net replacements is expected to exceed the number of openings due to growth.

The number of job openings for service occupations is projected to be 10.4 million in the 1996–2006 period, exceeding the number for professional occupations, the next largest group, by more than 2 million. Accounting for 1 out of every 5 total job openings, numerous opportunities for service workers are expected to result from both net replacements and employment growth. A large number of replacements are expected to result from the movement of young workers in food preparation and service occupations to other occupations.

Education, training requirements, earnings

Occupations generally requiring post-secondary institutional training accounted for 3 out of 10 workers employed in 1996. Conversely, the overwhelming majority of occupations require a high school diploma or less education. The largest education and training category is short-term, on-the-job training, in which workers can learn job skills in a few weeks or fewer. In 1996, the 53.5 million workers in those occupations accounted for 40 percent of total employment. (See table 6.) The most common occupations in this category are operators, fabricators, and laborers; and administrative support occupations, including clerical. These workers had the lowest weekly earnings of all the education and training groups—nearly 30 percent below the average for all full-time wage and salary workers. Although very few detailed occupations in this group appear on the list of fastest growing occupations, more than half of those with the largest job growth fall into this category. The projected increase in employment for all detailed occupations requiring short-term training is 7.2 million jobs. The total number of job openings due to employment growth plus net replacement needs is 22 million jobs, or 43 percent of the projected total number of job openings for all occupations.

The next largest training category is occupations requiring moderate-term, on-the-job training, in which workers can generally learn their skills after 1 to 12 months of combined on-the-job experience and informal training. This category accounted for nearly 17 million workers and 13 percent of total employment in 1996. Although the projected growth in employment is 1.5 million jobs, net replacements are expected to add 4.2 million additional job openings through 2006. The occupations in this group had weekly earnings that were below the average for all full-time workers, but 27 percent higher than the lowest training category.

Occupations in which workers generally require more than a year of on-the-job experience and formal training—such as police patrol officers; securities and financial services sales workers; and maintenance repairers, general utility—accounted for 8 percent of total employment. An additional 8 percent were employed mostly as supervisors in occupations requiring experience in another occupation that did not require post-secondary education. Total employment in these two training categories combined is projected to increase by 2.1 million, and total job openings are expected to be 8 million by 2006. Both categories had above-average earnings in 1996.

Occupations requiring postsecondary training but less than a bachelor's degree accounted for 6 percent of total employment in 1996, and are projected to have 2.3 million total job openings by 2006. The below-average earnings of workers with postsecondary vocational training are heavily weighted by the relatively low earnings among secretaries, a category that accounted for nearly half of the group's employment in 1996.

Several occupations in this educational category had significantly higher-than-average earnings, including aircraft mechanics; data processing equipment repairers; drafters; and sales agents, real estate. The remainder of occupations requiring postsecondary training but less than a bachelor's degree, generally require training leading to an associate's degree. This group accounted for 3 percent of all jobs in the base year and is expected to provide 1.6 million total job openings by 2006. Employees in this category earned significantly more than average in 1996. It is important to note, however, that half of the employees in this group are registered nurses. While most nurses currently get their training in associate's degree programs, a considerable number have obtained a bachelor's degree, which indicates that there is some overlapping of educational requirements among the groups.

Occupations requiring a bachelor's degree accounted for nearly 19 percent of all workers in 1996, but about a third of these workers needed experience in another occupation requiring at least a bachelor's degree before getting their current job. For both categories combined, employment is projected to grow by 5.6 million jobs and total job openings are expected to be nearly 11 million by 2006. Many of the fastest growing occupations and those with the largest projected nu-

Table 6. Employment and total job openings, 1996-2006, and 1996 median weekly earnings by education and training category

(Numbers in thousands of jobs)

Education and training category	Employment				Change		Total job openings due to growth and net replacements, 1996–2006[1]		1996 median weekly earnings, full-time workers
	Number		Percent distribution		Number	Percent	Number	Percent distribution	
	1996	2006	1996	2006					
Total, all occupations	132,353	150,927	100.0	100.0	18,574	14.0	50,563	100.0	$483
First professional degree	1,707	2,015	1.3	1.3	308	18.0	582	1.2	1,057
Doctoral degree	1,016	1,209	.8	.8	193	19.0	460	.9	847
Master's degree	1,371	1,577	1.0	1.0	206	15.0	430	.9	682
Work experience plus bachelor's or higher degree	8,971	10,568	6.8	7.0	1,597	17.8	3,481	6.9	786
Bachelor's degree	15,821	19,838	12.0	13.1	4,017	25.4	7,343	14.5	686
Associate's degree	4,122	5,036	3.1	3.3	915	22.2	1,614	3.2	639
Postsecondary vocational training	8,091	8,689	6.1	5.8	598	7.4	2,329	4.6	444
Work experience in a related occupation	9,966	11,177	7.5	7.4	1,211	12.2	3,285	6.5	534
Long-term on-the-job training	11,011	11,890	8.3	7.9	879	8.0	3,466	6.9	487
Moderate-term on-the-job training	16,792	18,260	12.7	12.1	1,468	8.7	5,628	11.1	434
Short-term on-the-job training	53,487	60,670	40.4	40.2	7,183	13.4	21,944	43.4	342

[1] Total job openings represent the sum of employment increases and net replacements. If employment change is negative, job openings due to growth are zero and total job openings equal net replacements.

merical increases require a bachelor's degree and all had higher-than-average weekly earnings in 1996.

Occupations requiring at least a bachelor's degree earned 42 percent more than the average, while those requiring work experience plus a bachelor's or higher degree earned 63 percent more. The overwhelming majority of employees in the latter category worked in managerial and administrative occupations in 1996. A relatively small proportion of occupations require more education than a bachelor's degree, including those requiring a first professional degree (1.3 percent), doctoral degree (0.8 percent), and master's degree (1.0). Together, these three categories are projected to add another 1.4 million job openings, 1996–2006.

All of the categories requiring at least an associate's degree are projected to have faster-than-average employment growth over the 1996–2006 period; those requiring less education and training are expected to grow more slowly than average. Consequently, the share of total job openings resulting from employment growth and net replacement needs in each of the education and training categories differs from the distribution of employment in the base year. For example, occupations requiring a bachelor's degree and those requiring short-term, on-the-job training are expected to provide greater shares of total job openings through 2006 than they did in 1996. However, occupations in the latter category will have many more openings attributable to net replacement needs than to employment growth. In general, workers in occupations requiring the least amount of education and training have less job attachment than employees in other occupations. Therefore, occupations in the lowest training categories have a greater share of total job openings than their share of openings created by employment growth alone. □

Footnotes

[1] Occupational projections presented in this article provide information to those interested in labor market issues. They also provide the background for analyses of future employment opportunities described in the forthcoming 1998–99 *Occupational Outlook Handbook*, BLS Bulletin 2500. Job outlook information in the 1998–99 *Handbook*, scheduled for release in early 1998, will use the projections presented in each of the articles that make up *Employment Outlook: 1996–2006*. For a description of the methodology used to develop employment projections, see *BLS Handbook of Methods*, Bulletin 2490 (Bureau of Labor Statistics, April 1997), pp. 122–29.

[2] The services industry division in this article includes State and local government hospitals and education. In the article on industry employment by James C. Franklin (this issue, pages 39–57), workers in State and local government hospitals and education are included in the estimates of government employment.

[3] This analysis excludes miscellaneous residual occupational groups.

[4] See the discussion on the uses of replacement needs information developed in *Occupational Projections and Training Data*, Bulletin 2471 (Bureau of Labor Statistics, January 1996).

Appendix: Occupational education and training requirements categories

First professional degree. *Occupations that require a professional degree.* Completion of the academic program usually requires at least 6 years of full-time equivalent academic study, including college study prior to entering the professional degree program.

Doctoral degree. *Occupations that generally require a Ph.D. or other doctoral degree.* Completion of the degree program usually requires at least 3 years of full-time equivalent academic work beyond the bachelor's degree.

Master's degree. *Occupations that generally require a master's degree.* Completion of the degree program usually requires 1 or 2 years of full-time equivalent study beyond the bachelor's degree.

Work experience, plus a bachelor's or higher degree. *Occupations that generally require work experience in an occupation requiring a bachelor's or higher degree.* Most occupations in this category are managerial occupations that require experience in a related nonmanagerial position.

Bachelor's degree. *Occupations that generally require a bachelor's degree.* Completion of the degree program generally requires at least 4 years, but not more than 5 years, of full-time equivalent academic work.

Associate's degree. *Occupations that generally require an associate's degree.* Completion of the degree program generally requires at least 2 years of full-time equivalent academic work.

Post-secondary vocational training. *Occupations that generally require completion of vocational school training.* Some programs last only a few weeks while others may last more than a year. In some occupations, a license is needed that requires passing an examination after completion of the training.

Work experience in a related occupation. *Occupations that generally require skills obtained through work experience in a related occupation.* Some occupations requiring work experience are supervisory or managerial occupations.

Long-term on-the-job training. *Occupations that generally require more than 12 months of on-the-job training or combined work experience and formal classroom instruction for workers to develop the skills needed for average job performance.* This category includes formal and informal apprenticeships that may last up to 4 years and short-term intensive employer-sponsored training that workers must successfully complete. Individuals undergoing training are generally considered to be employed in the occupation. This category includes occupations in which workers may gain experience in nonwork activities, such as professional athletes who gain experience through participation in athletic programs in academic institutions.

Moderate-term on-the-job training. *Occupations in which workers can develop the skills needed for average job performance after 1 to 12 months of combined on-the-job experience and informal training.*

Short-term on-the-job training. *Occupations in which workers generally can develop the skills needed for average job performance after a short demonstration or up to 1 month of on-the-job experience and instruction.*

Work-family issues

Integrating Work and Family: Challenges and Choices for a Changing World. Edited by Saroj Parasuraman and Jeffrey H. Greenhaus, Westport, CT, Quorum Books, 1997, 260 pp. $59.95.

For most of human history, integrating work and family was not a major problem. In hunter-gatherer and agrarian societies, all family members who were able took part in cooperative activities that supported the family. Even in the early stages of the Industrial Revolution, cottage industries kept workers and families together, and market work and family needs could be easily coordinated. With the advent of the factory system, however, the job site moved away from the home, and workers became increasingly disconnected from their families while being subjected to the rigid discipline of the work place.

Work-family conflicts came to the fore in the latter half of the 20th century, as millions of wives entered the labor market and families struggled to find ways to cope. New policies and programs have been put in place in both the public and private sectors to try to deal with the difficulties workers have in meeting their family and work obligations, and a large body of research and literature has arisen as scholars and others have tried to describe and understand the phenomenon.

Integrating Work and Family is a collection of essays by various authors designed to ". . . foster informed dialogue and debate among the various constituencies. . ." Some of the authors are engaged in academic research, while others are on the front lines (so to speak) in corporations and government. As a result, the book tends to be somewhat unfocused, as different writers approach the subject from their own particular points of interest and backgrounds. Nonetheless, it is quite informative, especially for readers who have only a passing knowledge of the subject.

Perhaps one of the most important points this book makes is that work-family conflicts and issues go far beyond work schedules and child- or elder-care responsibilities. For instance, in "A panoramic view of work and family," Faith Wohl suggests that the work-family conflict is not about time (quantity and quality), or about roles, but rather about values—individual and social priorities. Perry M. Christensen describes the balancing act of work-family integration amidst ever-changing dynamics by likening it to navigating a sailboat in "Toward a comprehensive work-life strategy." Tyler Phillips, in "The work-family issue from a consultant's perspective," describes work-family issues as including the community at large, as well as employers and employees. In "Service and work-and-family life," Barbara A. Gutek proposes a model for work-family issues in which the family is a customer (consumer) of services. She suggests that for many families who have difficulty purchasing these services—either because they have too little time or too little money (or both)—employers and other organizations could help take up some of the slack by providing workers with more convenient access to many of the necessary services. (Some examples include car washing, dry cleaning, banking, and fitness and stress reduction classes.)

In "Telecommuting as a response to helping people balance work and family," Francine Riley and Donna Weaver McCloskey offer at least a partial solution to some work-family problems. In a sense, telecommuting is something like a return to the days of cottage industry when market work was performed at home. The authors are quite enthusiastic about the idea, but telecommuting may not be the panacea its advocates believe it to be. Only certain kinds of jobs can be adapted to it, and it requires a great deal of self discipline on the part of the worker to set aside the ever-present distractions of home and family while working.

These, along with many other essays in the book, provide a broad-brush perspective on the work-family scene, but it has some important limitations. In addition to the lack of sharp focus that is inherent in books that are collections of articles, none of the essays offers a dissenting view. The authors all appear convinced that work-family policies and programs have beneficial effects for both families and employers. This does not leave much room for a debate in a book that is billed as an attempt to further debate. Also, none of the articles presents any data on the effects of such policies and programs, which makes any assessment of the impact of work-family policies and programs on either workers or employers very difficult. Moreover, the segment of the economy that is represented by the articles in the book is rather restricted; aside from those written by researchers whose background is primarily academic, the business sector is represented by authors from a large pharmaceutical manufacturer and a large accounting firm. Needless to say, these industries are not typical of private industry as a whole. Small businesses, the self-employed, and other areas of both the goods-producing and services-producing sectors are not represented in the discussions.

Parasuraman and Greenhaus, however, make no claim that their slender volume is a definitive work. Rather, they characterize it as stimulating dialogue and debate. Perhaps by leaving a number of questions unanswered, it will encourage readers who become interested in the subject to find out more about work-family issues and problems and discover the answers for themselves.

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Labor history

A Terrible Anger: The 1934 Waterfront and General Strikes in San Francisco. By David F. Selvin. Detroit,

MI, Wayne State University Press, 1996, 272 pp., bibliography. $26.95.

David Selvin has written a remarkable, unvarnished chronicle of the great 1934 social upheaval—the series of strikes and street battles culminating in the July 4-day general strike in San Francisco. It was the crucible that transformed a depression-wracked city with a degraded work force into a union stronghold. It curbed the power of an iron-fisted management and business leaders, who learned the hard way that unionism was here to stay.

This book is the product of Selvin's intimate, first-hand knowledge of the situation. As he wrote: "I was there that angry discordant summer of 1934, not as a participant but as a young, deeply engaged observer. If I could claim a first row seat, my vantage point was on the seat on the aisle, close up." Selvin worked as a researcher for the Pacific Coast Labor Bureau and then for the National Longshoremen's Board, appointed by President Franklin Roosevelt. As a consequence, he interviewed many strikers, employers, and public officials. His experience has been supplemented by more than 25 years of thorough research and reflections of those events. The book is fully documented with painstakingly gathered material. Hence, it gives a fully rounded out picture of all the protagonists—with neat silhouettes of employer figures like Roger Lapham, John Neylan, Mayor Angelo, and General Hugh Johnson, director of the National Recovery Administration. AFL leaders such as Mike Casey, as well as Harry Bridges, are portrayed in their crucial roles.

The book is put together in such a readable fashion that its gripping stories allow the readers to feel they were there. The street battles, the mass arrest of strikers, the overblown Red scare tactics, the Reds round-up, the interminable negotiations—every aspect of this incredible event are given their just due. After years as editor of *Northern California Labor*, Selvin must have engaged in considerable study and reflection to form his judgment about the people and the city. He explains why San Francisco became a bastion of unionism. He also describes how Harry Bridges emerged as the most influential strike leader: among other reasons was Bridges' insistence on working with AFL local leaders, contrary to the advice of Sam Darcy, the Communist boss of the West Coast. At the time, the Communists were calling the AFL leaders "labor fakers." Selvin debunks the claims of Darcy that he masterminded the strike. In fact, he debunks most of the history from the left and the right (the strike was just a communist plot, the anti-union writers argued. The citizenry did not buy that line).

Selvin's virtue is letting the events speak for themselves. This allows the reader to draw his or her own conclusions. It is a refreshing way to look at labor history.

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Notes on Current Labor Statistics

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics: series on labor force; employment; unemployment; labor compensation; consumer, producer, and international prices; productivity; international comparisons; and injury and illness statistics. In the notes that follow, the data in each group of tables are briefly described; key definitions are given; notes on the data are set forth; and sources of additional information are cited.

General notes

The following notes apply to several tables in this section:

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect on the data of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might prevent short-term evaluation of the statistical series. Tables containing data that have been adjusted are identified as "seasonally adjusted." (All other data are not seasonally adjusted.) Seasonal effects are estimated on the basis of past experience. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted data appear in tables 1–14, 16–17, 42, and 46. Seasonally adjusted labor force data in tables 1 and 4–9 were revised in the February 1997 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 1, 12–14 and 16–17 were revised in the July 1997 *Review* and reflect the experience through March 1997. A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 42 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month-to-month and quarter-to-quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All-Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data—such as the "real" earnings shown in table 14—are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current-dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1982 = 100, the hourly rate expressed in 1982 dollars is $2 ($3/150 x 100 = $2). The $2 (or any other resulting values) are described as "real," "constant," or "1982" dollars.

Sources of information

Data that supplement the tables in this section are published by the Bureau in a variety of sources. Definitions of each series and notes on the data are contained in later sections of these Notes describing each set of data. For detailed descriptions of each data series, see *BLS Handbook of Methods*, Bulletin 2414. Users also may wish to consult *Major Programs of the Bureau of Labor Statistics*, Report 871. News releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule appearing on the back cover of this issue.

More information about labor force, employment, and unemployment data and the household and establishment surveys underlying the data are available in the Bureau's monthly publication, *Employment and Earnings*. Historical unadjusted and seasonally adjusted data from the household survey are available on the Internet (http://stats.bls.gov/cgi-bin/dsrv?lf). Historically comparable unadjusted and seasonally adjusted data from the establishment survey also are available on the Internet (http://stats.bls.gov/cgi-bin/dsrv?ee). Additional information on labor force data for sub-States are provided in the BLS annual report, *Geographic Profile of Employment and Unemployment*.

For a comprehensive discussion of the Employment Cost Index, see *Employment Cost Indexes and Levels, 1975–95*, BLS Bulletin 2466. The most recent data from the Employee Benefits Survey appear in the following Bureau of Labor Statistics bulletins: *Employee Benefits in Medium and Large Firms; Employee Benefits in Small Private Establishments; and Employee Benefits in State and Local Governments*.

More detailed data on consumer and producer prices are published in the monthly periodicals, *The CPI Detailed Report* and *Producer Price Indexes*. For an overview of the CPI reflecting 1982–84 expenditure patterns, see *The Consumer Price Index: 1987 Revision*, BLS Report 736. Additional data on international prices appear in monthly news releases.

For a listing of available industry productivity indexes and their components, see *Productivity Measures for Selected Industries and Government Services*, BLS Bulletin 2461.

For additional information on international comparisons data, see *International Comparisons of Unemployment*, BLS Bulletin 1979.

Detailed data on the occupational injury and illness series are published in *Occupational Injuries and Illnesses in the United States, by Industry*, a BLS annual bulletin.

Finally, the *Monthly Labor Review* carries analytical articles on annual and longer term developments in labor force, employment, and unemployment; employee compensation and collective bargaining; prices; productivity; international comparisons; and injury and illness data.

Symbols

n.e.c. = not elsewhere classified.
n.e.s. = not elsewhere specified.
p = preliminary. To increase the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.
r = revised. Generally, this revision reflects the availability of later data, but also may reflect other adjustments.

Comparative Indicators

(Tables 1–3)

Comparative indicators tables provide an overview and comparison of major BLS statistical series. Consequently, although many of the included series are available monthly, all measures in these comparative tables are presented quarterly and annually.

Labor market indicators include employment measures from two major surveys and information on rates of change in compensation provided by the Employment Cost Index (ECI) program. The labor force participation rate, the employment-to-population ratio, and unemployment rates for major demographic groups based on the Current Population ("household") Survey are presented, while measures of employment and average weekly hours by major industry sector are given using nonfarm payroll data. The Employment Cost Index (compensation), by major sector and by bargaining status, is chosen from a variety of BLS compensation and wage measures because it provides a comprehensive measure of employer costs for hiring labor, not just outlays for wages, and it is not affected by employment shifts among occupations and industries.

Data on **changes in compensation,**

prices, and productivity are presented in table 2. Measures of rates of change of compensation and wages from the Employment Cost Index program are provided for all civilian nonfarm workers (excluding Federal and household workers) and for all private nonfarm workers. Measures of changes in consumer prices for all urban consumers; producer prices by stage of processing; overall prices by stage of processing; and overall export and import price indexes are given. Measures of productivity (output per hour of all persons) are provided for major sectors.

Alternative measures of wage and compensation rates of change, which reflect the overall trend in labor costs, are summarized in table 3. Differences in concepts and scope, related to the specific purposes of the series, contribute to the variation in changes among the individual measures.

Notes on the data

Definitions of each series and notes on the data are contained in later sections of these notes describing each set of data.

Employment and Unemployment Data

(Tables 1; 4–20)

Household survey data

Description of the series

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 50,000 households selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons include (1) all those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff are also counted among the unemployed. **The unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population. Persons **not in the labor force** are those not classified as employed or unemployed. This group includes discouraged workers, defined as persons who want and are available for a job and who have looked for work sometime in the the past 12 months (or since the end of their last job if they held one within the past 12 months), but are not currently looking, because they believe there are no jobs available or there are none for which they would qualify. The **civilian noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy. The **civilian labor force participation** rate is the proportion of the civilian noninstitutional population that is in the labor force. The **employment-population ratio** is employment as a percent of the civilian noninstitutional population.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the intercensal years. These adjustments affect the comparability of historical data. A description of these adjustments and their effect on the various data series appears in the Explanatory Notes of *Employment and Earnings.*

Labor force data in tables 1 and 4–9 are seasonally adjusted. Since January 1980, national labor force data have been seasonally adjusted with a procedure called X-11 ARIMA which was developed at Statistics Canada as an extension of the standard X-11 method previously used by BLS. A detailed description of the procedure appears in the X-11 *ARIMA Seasonal Adjustment Method,* by Estela Bee Dagum (Statistics Canada, Catalogue No. 12-564E, January 1983).

At the end of each calendar year, historical seasonally adjusted data usually are revised, and projected seasonal adjustment factors are calculated for use during the January–June period. Because of the redesign of the survey, seasonally adjusted data back to 1994 usually are revised. In July, new seasonal adjustment factors, which incorporate the experience through June, are produced for the July–December period, but no revisions are made in the historical data.

FOR ADDITIONAL INFORMATION on national household survey data, contact the Division of Labor Force Statistics: (202) 606–6378.

Revisions to household data

Data relating to 1994 and subsequent years are not directly comparable with data for 1993 and earlier years because of the introduction of a major redesign of the survey questionnaire and collection methodology. (See the February 1994 issue of *Employment and Earnings,* a monthly publication of the Bureau of Labor Statistics.) Moreover, data for 1990 forward incorporate 1990 census-based population controls, adjusted for the estimated undercount. Additional information on the population revisions appears in the March 1996 issue of *Employment and Earnings.*

Establishment survey data

Description of the series

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by about 390,000 establishments representing all industries except agriculture. Industries are classified in accordance with the 1987 *Standard Industrial Classification (SIC) Manual.* In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

An **establishment** is an economic unit which produces goods or services (such as a factory or store) at a single location and is engaged in one type of economic activity.

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th day of the month. Persons holding more than one job (about 5 percent of all persons in the labor force)

are counted in each establishment which reports them.

Production workers in manufacturing include working supervisors and nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 11–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in the following industries: transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for about four-fifths of the total employment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received, and are different from standard or scheduled hours. **Overtime hours** represent the portion of average weekly hours which was in excess of regular hours and for which overtime premiums were paid.

The **Diffusion Index** represents the percent of industries in which employment was rising over the indicated period, plus one-half of the industries with unchanged employment; 50 percent indicates an equal balance between industries with increasing and decreasing employment. In line with Bureau practice, data for the 1-, 3-, and 6-month spans are seasonally adjusted, while those for the 12-month span are unadjusted. Data are centered within the span. Table 17 provides an index on private nonfarm employment based on 356 industries, and a manufacturing index based on 139 industries. These indexes are useful for measuring the dispersion of economic gains or losses and are also economic indicators.

Notes on the data

Establishment survey data are annually adjusted to comprehensive counts of employment (called "benchmarks"). The latest adjustment, which incorporated March 1996 benchmarks, was made with the release of May 1997 data, published in the July 1997 issue of the *Review.* Coincident with the benchmark adjustment, seasonally adjusted data were revised back to 1988 to reflect updated seasonal factors and seasonal adjustment procedures. Unadjusted data from April 1996 forward and seasonally adjusted data from January 1993 forward are subject to revision in future benchmarks.

Revisions in State data (table 11) occurred with the publication of January 1997 data.

Beginning in June 1996, the BLS uses the X-12 ARIMA methodology to seasonally adjust establishment survey data. This procedure, developed by the Bureau of the Census, controls for the effect of varying survey intervals (also known as the 4- versus 5-week effect), thereby providing improved measurement of over-the-month changes and underlying economic trends. Revisions of data, usually for the most recent 5-year period, are made once a year coincident with the benchmark revisions.

In the establishment survey, estimates for the most recent 2 months are based on incomplete returns and are published as preliminary in the tables (12–17 in the *Review).* When all returns have been received, the estimates are revised and published as "final" (prior to any benchmark revisions) in the third month of their appearance. Thus, December data are published as preliminary in January and February and as final in March. For the same reasons, quarterly establishment data (table 1) are preliminary for the first 2 months of publication and final in the third month. Thus, fourth-quarter data are published as preliminary in January and February and as final in March.

A comprehensive discussion of the differences between household and establishment data on employment appears in Gloria P. Green, "Comparing employment estimates from household and payroll surveys," *Monthly Labor Review,* December 1969, pp. 9–20.

FOR ADDITIONAL INFORMATION on establishment survey data, contact the Division of Monthly Industry Employment Statistics: (202) 606–6555.

Unemployment data by State

Description of the series

Data presented in this section are obtained from the Local Area Unemployment Statistics (LAUS) program, which is conducted in cooperation with State employment security agencies.

Monthly estimates of the labor force, employment, and unemployment for States and sub-State areas are a key indicator of local economic conditions, and form the basis for determining the eligibility of an area for benefits under Federal economic assistance programs such as the Job Training Partnership Act. Seasonally adjusted unemployment rates are presented in table 10. Insofar as possible, the concepts and definitions underlying these data are those used in the national estimates obtained from the CPS.

Notes on the data

Data refer to State of residence. Monthly data for all States and the District of Columbia are derived using standardized procedures established by BLS. Once a year, estimates are revised to new population controls, usually with publication of January estimates, and benchmarked to annual average CPS levels.

FOR ADDITIONAL INFORMATION on data in this series, call (202) 606–6392 (table 10) or (202) 606–6589 (table 11).

Compensation and Wage Data

(Tables 1–3; 21–26)

COMPENSATION AND WAGE DATA are gathered by the Bureau from business establishments, State and local governments, labor unions, collective bargaining agreements on file with the Bureau, and secondary sources.

Employment Cost Index

Description of the series

The **Employment Cost Index** (ECI) is a quarterly measure of the rate of change in compensation per hour worked and includes wages, salaries, and employer costs of employee benefits. It uses a fixed market basket of labor—similar in concept to the Consumer Price Index's fixed market basket of goods and services—to measure change over time in employer costs of employing labor.

Statistical series on total compensation costs, on wages and salaries, and on benefit costs are available for private nonfarm workers excluding proprietors, the self-employed, and household workers. The total compensation costs and wages and salaries series are also available for State and local government workers and for the civilian nonfarm economy, which consists of private industry and State and local government workers combined. Federal workers are excluded.

The Employment Cost Index probability sample consists of about 4,400 private nonfarm establishments providing about 23,000 occupational observations and 1,000 State and local government establishments providing 6,000 occupational observations selected to represent total employment in each sector. On average, each reporting unit provides wage and compensation information on five well-specified occupations. Data are collected each quarter for the pay period including the 12th day of March, June, September, and December.

Beginning with June 1986 data, fixed

employment weights from the 1980 Census of Population are used each quarter to calculate the civilian and private indexes and the index for State and local governments. (Prior to June 1986, the employment weights are from the 1970 Census of Population.) These fixed weights, also used to derive all of the industry and occupation series indexes, ensure that changes in these indexes reflect only changes in compensation, not employment shifts among industries or occupations with different levels of wages and compensation. For the bargaining status, region, and metropolitan/nonmetropolitan area series, however, employment data by industry and occupation are not available from the census. Instead, the 1980 employment weights are reallocated within these series each quarter based on the current sample. Therefore, these indexes are not strictly comparable to those for the aggregate, industry, and occupation series.

Definitions

Total compensation costs include wages, salaries, and the employer's costs for employee benefits.

Wages and salaries consist of earnings before payroll deductions, including production bonuses, incentive earnings, commissions, and cost-of-living adjustments.

Benefits include the cost to employers for paid leave, supplemental pay (including nonproduction bonuses), insurance, retirement and savings plans, and legally required benefits (such as Social Security, workers' compensation, and unemployment insurance).

Excluded from wages and salaries and employee benefits are such items as payment-in-kind, free room and board, and tips.

Notes on the data

The Employment Cost Index for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and salaries and benefits combined—were published beginning in 1980. The series of changes in wages and salaries and for total compensation in the State and local government sector and in the civilian nonfarm economy (excluding Federal employees) were published beginning in 1981. Historical indexes (June 1981 = 100) of the quarterly rates of change are presented in the March issue of the BLS quarterly, *Compensation and Working Conditions.*

FOR ADDITIONAL INFORMATION on the Employment Cost Index, contact the Division of Employment Cost Trends: (202) 606–6199.

Employee Benefits Survey

Description of the series

Employee benefits data are obtained from the Employee Benefits Survey, an annual survey of the incidence and provisions of selected benefits provided by employers. The survey collects data from a sample of approximately 6,000 private sector and State and local government establishments. The data are presented as a percentage of employees who participate in a certain benefit, or as an average benefit provision (for example, the average number of paid holidays provided to employees per year). Selected data from the survey are presented in table 25.

The survey covers paid leave benefits such as lunch and rest periods, holidays and vacations, and personal, funeral, jury duty, military, parental, and sick leave; sickness and accident, long-term disability, and life insurance; medical, dental, and vision care plans; defined benefit and defined contribution plans; flexible benefits plans; reimbursement accounts; and unpaid parental leave.

Also, data are tabulated on the incidence of several other benefits, such as severance pay, child-care assistance, wellness programs, and employee assistance programs.

Definitions

Employer-provided benefits are benefits that are financed either wholly or partly by the employer. They may be sponsored by a union or other third party, as long as there is some employer financing. However, some benefits that are fully paid for by the employee also are included. For example, long-term care insurance and postretirement life insurance paid entirely by the employee are included because the guarantee of insurability and availability at group premium rates are considered a benefit.

Participants are workers who are covered by a benefit, whether or not they use that benefit. If the benefit plan is financed wholly by employers and requires employees to complete a minimum length of service for eligibility, the workers are considered participants whether or not they have met the requirement. If workers are required to contribute towards the cost of a plan, they are considered participants only if they elect the plan and agree to make the required contributions.

Defined benefit pension plans use predetermined formulas to calculate a retirement benefit, and obligate the employer to provide those benefits. Benefits are generally based on salary, years of service, or both.

Defined contribution plans generally specify the level of employer and employee contributions to a plan, but not the formula for determining eventual benefits. Instead, individual accounts are set up for participants, and benefits are based on amounts credited to these accounts.

Tax-deferred savings plans are a type of defined contribution plan that allow participants to contribute a portion of their salary to an employer-sponsored plan and defer income taxes until withdrawal.

Flexible benefit plans allow employees to choose among several benefits, such as life insurance, medical care, and vacation days, and among several levels of care within a given benefit.

Notes on the data

Surveys of employees in medium and large establishments conducted over the 1979–86 period included establishments that employed at least 50, 100, or 250 workers, depending on the industry (most service industries were excluded). The survey conducted in 1987 covered only State and local governments with 50 or more employees. The surveys conducted in 1988 and 1989 included medium and large establishments with 100 workers or more in private industries. All surveys conducted over the 1979–89 period excluded establishments in Alaska and Hawaii, as well as part-time employees.

Beginning in 1990, surveys of State and local governments and small establishments are conducted in even-numbered years and surveys of medium and large establishments are conducted in odd-numbered years. The small establishment survey includes all private nonfarm establishments with fewer than 100 workers, while the State and local government survey includes all governments, regardless of the number of workers. All three surveys include full- and part-time workers, and workers in all 50 States and the District of Columbia.

FOR ADDITIONAL INFORMATION on the Employee Benefits Survey, contact the Division of Occupational Pay and Employee Benefit Levels: (202) 606–6222.

Work stoppages

Description of the series

Data on work stoppages measure the number and duration of major strikes or lockouts (involving 1,000 workers or more) occurring during the month (or year), the number of workers involved, and the amount of time lost because of stoppage.

Data are largely from newspaper accounts and cover only establishments directly involved in a stoppage. They do not measure the indirect or secondary effect of stoppages on other establishments whose employees are idle owing to material shortages or lack of service.

Definitions

Number of stoppages: The number of strikes and lockouts involving 1,000 workers or more and lasting a full shift or longer.

Workers involved: The number of workers directly involved in the stoppage.

Number of days idle: The aggregate number of workdays lost by workers involved in the stoppages.

Days of idleness as a percent of estimated working time: Aggregate workdays lost as a percent of the aggregate number of standard workdays in the period multiplied by total employment in the period.

Notes on the data

This series is not comparable with the one terminated in 1981 that covered strikes involving six workers or more.

FOR ADDITIONAL INFORMATION on work stoppages data, contact the Division of Developments in Labor–Management Relations: (202) 606–6275.

Price Data

(Tables 2; 27–37)

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period—1982 = 100 for many Producer Price Indexes, 1982–84 = 100 for many Consumer Price Indexes (unless otherwise noted), and 1990 = 100 for International Price Indexes.

Consumer Price Indexes

Description of the series

The **Consumer Price Index** (CPI) is a measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The CPI is calculated monthly for two population groups, one consisting only of urban households whose primary source of income is derived from the employment of wage earners and clerical workers, and the other consisting of all urban households. The wage earner index (CPI-W) is a continuation of the historic index that was introduced well over a half-century ago for use in wage negotiations. As new uses were developed for the CPI in recent years, the need for a broader and more representative index became apparent. The all-urban consumer index (CPI-U), introduced in 1978, is representative of the 1982–84 buying habits of about 80 percent of the noninstitutional population of the United States at that time, compared with 32 percent represented in the CPI-W. In addition to wage earners and clerical workers, the CPI-U covers professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors' and dentists' fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items are kept essentially unchanged between major revisions so that only price changes will be measured. All taxes directly associated with the purchase and use of items are included in the index.

Data collected from more than 19,000 retail establishments and 57,000 housing units in 85 urban areas across the country are used to develop the "U.S. city average." Separate estimates for 15 major urban centers are presented in table 28. The areas listed are as indicated in footnote 1 to the table. The area indexes measure only the average change in prices for each area since the base period, and do not indicate differences in the level of prices among cities.

Notes on the data

In January 1983, the Bureau changed the way in which homeownership costs are meaured for the CPI-U. A rental equivalence method replaced the asset-price approach to homeownership costs for that series. In January 1985, the same change was made in the CPI-W. The central purpose of the change was to separate shelter costs from the investment component of home-ownership so that the index would reflect only the cost of shelter services provided by owner-occupied homes. An updated CPI-U and CPI-W were introduced with release of the January 1987 data.

FOR ADDITIONAL INFORMATION on consumer prices, contact the Division of Consumer Prices and Price Indexes: (202) 606–7000.

Producer Price Indexes

Description of the series

Producer Price Indexes (PPI) measure average changes in prices received by domestic producers of commodities in all stages of processing. The sample used for calculating these indexes currently contains about 3,200 commodities and about 80,000 quotations per month, selected to represent the movement of prices of all commodities produced in the manufacturing; agriculture, forestry, and fishing; mining; and gas and electricity and public utilities sectors. The stage-of-processing structure of PPI organizes products by class of buyer and degree of fabrication (that is, finished goods, intermediate goods, and crude materials). The traditional commodity structure of PPI organizes products by similarity of end use or material composition. The industry and product structure of PPI organizes data in accordance with the Standard Industrial Classification (SIC) and the product code extension of the SIC developed by the U.S. Bureau of the Census.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

Since January 1992, price changes for the various commodities have been averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1987. The detailed data are aggregated to obtain indexes for stage-of-processing groupings, commodity groupings, durability-of-product groupings, and a number of special composite groups. All Producer Price Index data are subject to revision 4 months after original publication.

FOR ADDITIONAL INFORMATION on producer prices, contact the Division of Industrial Prices and Price Indexes: (202) 606–7705.

International Price Indexes

Description of the series

The **International Price Program** produces monthly and quarterly export and import price indexes for nonmilitary goods traded between the United States and the rest of the world. The export price index provides a measure of price change for all products sold by U.S. residents to foreign buyers. ("Residents" is defined as in the national income accounts; it includes corporations, businesses, and individuals, but does not require the organizations to be U.S. owned nor the individuals to have U.S. citizenship.) The import price index provides a measure of price change for goods purchased from other countries by U.S. residents.

The product universe for both the import and export indexes includes raw materials, agricultural products, semifinished manufactures, and finished manufactures, including both capital and consumer goods. Price data for these items are collected primarily by mail questionnaire. In nearly all cases, the data are collected directly from the exporter or importer, although in a few cases, prices are obtained from other sources.

To the extent possible, the data gathered refer to prices at the U.S. border for exports and at either the foreign border or the U.S. border for imports. For nearly all products, the prices refer to transactions completed during the first week of the month. Survey respondents are asked to indicate all discounts, allowances, and rebates applicable to the reported prices, so that the price used in the calculation of the indexes is the actual price for which the product was bought or sold.

In addition to general indexes of prices for U.S. exports and imports, indexes are also published for detailed product categories of exports and imports. These categories are defined according to the five-digit level of detail for the Bureau of Economic Analysis End-use Classification (SITC), and the four-digit level of detail for the Harmonized System. Aggregate import indexes by country or region of origin are also available.

BLS publishes indexes for selected categories of internationally traded services, calculated on an international basis and on a balance-of-payments basis.

Notes on the data

The export and import price indexes are weighted indexes of the Laspeyres type. Price relatives are assigned equal importance within each harmonized group and are then aggregated to the higher level. The values assigned to each weight category are based on trade value figures compiled by the Bureau of the Census. The trade weights currently used to compute both indexes relate to 1990.

Because a price index depends on the same items being priced from period to period, it is necessary to recognize when a product's specifications or terms of transaction have been modified. For this reason, the Bureau's questionnaire requests detailed descriptions of the physical and functional characteristics of the products being priced, as well as information on the number of units bought or sold, discounts, credit terms, packaging, class of buyer or seller, and so forth. When there are changes in either the specifications or terms of transaction of a product, the dollar value of each change is deleted from the total price change to obtain the "pure" change. Once this value is determined, a linking procedure is employed which allows for the continued repricing of the item.

For the export price indexes, the preferred pricing is f.a.s. (free alongside ship) U.S. port of exportation. When firms report export prices f.o.b. (free on board), production point information is collected which enables the Bureau to calculate a shipment cost to the port of exportation. An attempt is made to collect two prices for imports. The first is the import price f.o.b. at the foreign port of exportation, which is consistent with the basis for valuation of imports in the national accounts. The second is the import price c.i.f.(costs, insurance, and freight) at the U.S. port of importation, which also includes the other costs associated with bringing the product to the U.S. border. It does not, however, include duty charges. For a given product, only one price basis series is used in the construction of an index.

FOR ADDITIONAL INFORMATION on international prices, contact the Division of International Prices: (202) 606–7155.

Productivity Data

(Tables 2; 38–41)

Business sector and major sectors

Description of the series

The productivity measures relate real output to real input. As such, they encompass a family of measures which include single-factor input measures, such as output per unit of labor input (output per hour) or output per unit of capital input, as well as measures of multifactor productivity (output per unit of combined labor and capital inputs). The Bureau indexes show the change in output relative to changes in the various inputs. The measures cover the business, nonfarm business, manufacturing, and nonfinancial corporate sectors.

Corresponding indexes of hourly compensation, unit labor costs, unit nonlabor payments, and prices are also provided.

Definitions

Output per hour of all persons (labor productivity) is the quantity of goods and services produced per hour of labor input. **Output per unit of capital services** (capital productivity) is the quantity of goods and services produced per unit of capital services input. **Multifactor productivity** is the quantity of goods and services produced per combined unit of labor and capital inputs.

Compensation per hour is total compensation divided by hours at work. Total compensation equals the wages and salaries of employees plus employers' contributions for social insurance and private benefit plans, plus an estimate of these payments for the self-employed (except for nonfinancial corporations in which there are no self-employed). **Real compensation per hour** is compensation per hour deflated by the change in the Consumer Price Index for All Urban Consumers.

Unit labor costs are the labor compensation costs expended in the production of a unit of output and are derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from current-dollar value of output and dividing by output.

Unit nonlabor costs contain all the components of unit nonlabor payments except unit profits.

Unit profits include corporate profits with inventory valuation and capital consumption adjustments per unit of output.

Hours of all persons are the total hours at work of payroll workers, self-employed persons, and unpaid family workers.

Labor inputs are hours of all persons adjusted for the effects of changes in the education and experience of the labor force.

Capital services are the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories—weighted by rental prices for each type of asset.

Combined units of labor and capital inputs are derived by combining changes in labor and capital input with weights which represent each component's share of total output. The indexes for capital services, labor inputs, and combined units of labor and capital are based on changing weights which are averages of the shares in the current and preceding year (the Tornquist index-number formula).

Notes on the data

Business sector output is an annually-weighted index constructed by excluding from real gross domestic product (GDP) the following outputs: general government, nonprofit institutions, paid employees of private households, and the rental value of owner-occupied dwellings. Nonfarm business also excludes farming. Private business and private nonfarm business further exclude government enterprises. The measures are supplied by the U.S. Department of Commerce's Bureau of Economic Analysis. Annual estimates of manufacturing sectoral output are produced by the Bureau of Labor Statistics. Quarterly manufacturing output indexes from the Federal Reserve Board are adjusted to these annual output measures

by the BLS. Compensation data are developed from data of the Bureau of Economic Analysis and the Bureau of Labor Statistics. Hours data are developed from data of the Bureau of Labor Statistics.

The productivity and associated cost measures in tables 38–41 describe the relationship between output in real terms and the labor and capital inputs involved in its production. They show the changes from period to period in the amount of goods and services produced per unit of input.

Although these measures relate output to hours and capital services, they do not measure the contributions of labor, capital, or any other specific factor of production. Rather, they reflect the joint effect of many influences, including changes in technology; shifts in the composition of the labor force; capital investment; level of output; changes in the utilization of capacity, energy, material, and research and development; the organization of production; managerial skill; and characteristics and efforts of the work force.

FOR ADDITIONAL INFORMATION on this productivity series, contact the Division of Productivity Research: (202) 606–5606.

Industry productivity measures

Description of the series

The BLS industry productivity data supplement the measures for the business economy and major sectors with annual measures of labor productivity for selected industries at the three- and four-digit levels of the Standard Industrial Classification system. The industry measures differ in methodology and data sources from the productivity measures for the major sectors because the industry measures are developed independently of the National Income and Product Accounts framework used for the major sector measures.

Definitions

Output per employee hour is derived by dividing an index of industry output by an index of aggregate hours of all employees. Output indexes are based on quantifiable units of products or services, or both, combined with value-share weights. Whenever possible, physical quantities are used as the unit of measurement for output. If quantity data are not available for a given industry, data on the constant-dollar value of production are used.

The **labor input** series consist of the hours of all employees (production and nonproduction workers), the hours of all persons (paid employees, partners, proprietors, and unpaid family workers), or the number of employees, depending upon the industry.

Notes on the data

The industry measures are compiled from data produced by the Bureau of Labor Statistics, the Departments of Commerce, Interior, and Agriculture, the Federal Reserve Board, regulatory agencies, trade associations, and other sources.

For most industries, the productivity indexes refer to the output per hour of all employees. For some transportation industries, only indexes of output per employee are prepared. For some trade and service industries, indexes of output per hour of all persons (including self-employed) are constructed.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Industry Productivity Studies: (202) 606–5618.

International Comparisons

(Tables 42–44)

Labor force and unemployment

Description of the series

Tables 42 and 43 present comparative measures of the labor force, employment, and unemployment—approximating U.S. concepts—for the United States, Canada, Australia, Japan, and several European countries. The unemployment statistics (and, to a lesser extent, employment statistics) published by other industrial countries are not, in most cases, comparable to U.S. unemployment statistics. Therefore, the Bureau adjusts the figures for selected countries, where necessary, for all known major definitional differences. Although precise comparability may not be achieved, these adjusted figures provide a better basis for international comparisons than the figures regularly published by each country.

Definitions

For the principal U.S. definitions of the **labor force**, **employment**, and **unemployment**, see the Notes section on Employment and Unemployment Data: Household survey data.

Notes on the data

The adjusted statistics have been adapted to the age at which compulsory schooling ends in each country, rather than to the U.S. standard of 16 years of age and older. Therefore, the adjusted statistics relate to the population aged 16 and older in France, Sweden, and the United Kingdom; 15 and older in Canada, Australia, Japan, Germany, Italy from 1993 onward, and the Netherlands; and 14 and older in Italy prior to 1993. The institutional population is included in the denominator of the labor force participation rates and employment-population ratios for Japan and Germany; it is excluded for the United States and the other countries.

In the U.S. labor force survey, persons on layoff who are awaiting recall to their jobs are classified as unemployed. European and Japanese layoff practices are quite different in nature from those in the United States; therefore, strict application of the U.S. definition has not been made on this point. For further information, see *Monthly Labor Review*, December 1981, pp. 8–11.

The figures for one or more recent years for France, Germany, Italy, the Netherlands, and the United Kingdom are calculated using adjustment factors based on labor force surveys for earlier years and are considered preliminary. The recent-year measures for these countries, therefore, are subject to revision whenever data from more current labor force surveys become available.

There are breaks in the data series for the United States (1990, 1994), France (1992), Italy (1991, 1993), the Netherlands (1988), and Sweden (1987).

For the United States, the break in series reflects a major redesign of the labor force survey questionnaire and collection methodology introduced in January 1994. Revised population estimates based on the 1990 Census, adjusted for the estimated undercount, also were incorporated. In 1996, previously published data for the 1990–1993 period were revised to reflect the 1990 census-based population controls, adjusted for the undercount. Therefore, data for 1994 onward are not directly comparable with data for 1993 and earlier years because of the redesign, and data for 1990 onward are not directly comparable with data for 1989 and earlier years because of the introduction of the 1990 census-based population controls, adjusted for the undercount. See the Notes section on Employment and Unemployment Data of this *Review*.

For France, the 1992 break reflects the substitution of standardized European Union Statistical Office (EUROSTAT) unemployment statistics for the unemployment data estimated according to the International Labor Office (ILO) definition and published in the Organization for Economic Cooperation and Development (OECD) annual yearbook and quarterly update. This change was made because the EUROSTAT data are more up-to-date than the OECD figures. Also, since 1992, the EUROSTAT definitions are closer to the U.S. definitions than they were in prior years. The impact of this revision was to lower the unemployment rate by 0.1 percentage point in

1992 and 1993, by 0.4 percentage point in 1994, and 0.6 percentage point in 1995.

For Italy, the 1991 break reflects a revision in the method of weighting sample data. The impact was to increase the unemployment rate by approximately 0.3 percentage point, from 6.6 to 6.9 percent in 1991.

In October 1992, the survey methodology was revised and the definition of unemployment was changed to include only those who were actively looking for a job within the 30 days preceding the survey and who were available for work. In addition, the lower age limit for the labor force was raised from 14 to 15 years. (Prior to these changes, BLS adjusted Italy's published unemployment rate downward by excluding from the unemployed those persons who had not actively sought work in the past 30 days.) The break in the series also reflects the incorporation of the 1991 population census results. The impact of these changes was to raise Italy's adjusted unemployment rate by approximately 1.2 percentage points, from 8.3 to 9.5 percent in fourth-quarter 1992. These changes did not affect employment significantly, except in 1993. Estimates by the Italian Statistical Office indicate that employment declined by about 3 percent in 1993, rather than the nearly 4 percent indicated by the data shown in table 43. This difference is attributable mainly to the incorporation of the 1991 population benchmarks in the 1993 data. Data for earlier years have not been adjusted to incorporate the 1991 census results.

For the Netherlands, a new survey questionnaire was introduced in 1992 that allowed for a closer application of ILO guidelines. EUROSTAT has revised the Dutch series back to 1988 based on the 1992 changes. The 1988 revised unemployment rate is 7.6 percent; the previous estimate for the same year was 9.3 percent.

There have been two breaks in series in the Swedish labor force survey, in 1987 and 1993. Adjustments have been made for the 1993 break back to 1987. In 1987, a new questionnaire was introduced. Questions regarding current availability were added and the period of active workseeking was reduced from 60 days to 4 weeks. These changes lowered Sweden's 1987 unemployment rate by 0.4 percentage point, from 2.3 to 1.9 percent. In 1993, the measurement period for the labor force survey was changed to represent all 52 weeks of the year rather than one week each month and a new adjustment for population totals was introduced. The impact was to raise the unemployment rate by approximately 0.5 percentage point, from 7.6 to 8.1 percent. Statistics Sweden revised its labor force survey data for 1987–1992 to take into account the break in 1993. The adjustment raised the Swedish unemployment rate by 0.2 percentage point in 1987 and gradually rose to 0.5 percentage point in 1992.

Beginning with 1987, BLS has adjusted the Swedish data to classify students who also sought work as unemployed. The impact of this change was to increase the adjusted unemployment rate by 0.1 percentage point in 1987 and by 1.8 percentage points in 1994, when unemployment was higher. By 1994, the adjusted unemployment rate had risen from 7.8 to 9.6 percent due to the adjustment to include students.

The net effect of the 1987 and 1993 changes and the BLS adjustment for students seeking work lowered Sweden's 1987 unemployment rate from 2.3 to 2.2 percent.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 606–5654.

Manufacturing productivity and labor costs

Description of the series

Table 44 presents comparative indexes of manufacturing labor productivity (output per hour), output, total hours, compensation per hour, and unit labor costs for the United States, Canada, Japan, and nine European countries. These measures are trend comparisons — that is, series that measure changes over time — rather than level comparisons. There are greater technical problems in comparing the levels of manufacturing output among countries.

BLS constructs the comparative indexes from three basic aggregate measures — output, total labor hours, and total compensation. The hours and compensation measures refer to all employed persons (wage and salary earners plus self-employed persons and unpaid family workers) in the United States, Canada, Japan, France, Germany, Norway, and Sweden, and to all employees (wage and salary earners) in the other countries.

Definitions

Output, in general, refers to value added in manufacturing from the national accounts of each country. However, the output series for Japan prior to 1970 is an index of industrial production, and the national accounts measures for the United Kingdom are essentially identical to their indexes of industrial production. While methods of deriving national accounts measures differ from country to country, BLS has reviewed these methods and determined that the series are sufficiently comparable for measuring comparative trends in productivity and unit labor costs.

The 1977–94 output data for the United States are the gross product originating (value added) measures prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce. Comparable manufacturing output data currently are not available prior to 1977. The 1994–95 percent changes in manufacturing output are based on the trend shown by the industrial production index published by the U.S. Federal Reserve Board for the manufacturing sector.

U.S. gross product originating is a chain-type annual-weighted series. (For more information on the U.S. measure, see Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry, 1959–94," *Survey of Current Business*, August 1996, pp. 133–55.) The Japanese value added series is based upon one set of fixed price weights for the years 1970 through 1996. Output series for the other foreign economies also employ fixed price weights, but the weights are updated periodically (for example, every 5 or 10 years).

To preserve the comparability of the U.S. measures with those for other economies, BLS uses gross product originating in manufacturing for the United States for these comparative measures. The gross product originating series differs from the manufacturing output series that BLS publishes in its news releases on quarterly measures of U.S. productivity and costs (and that underlies the measures that appear in tables 38 and 40 in this section). The quarterly measures are on a "sectoral output" basis, rather than a value-added basis. Sectoral output is gross output less intrasector transactions.

Total labor hours refers to hours worked in all countries. The measures are developed from statistics of manufacturing employment and average hours. The series used for France (from 1970 forward), Norway, and Sweden are official series published with the national accounts. Where official total hours series are not available, the measures are developed by BLS using employment figures published with the national accounts, or other comprehensive employment series, and estimates of annual hours worked. For Germany, BLS uses estimates of average hours worked developed by a research institute connected to the Ministry of Labor for use with the national accounts employment figures. For the other countries, BLS constructs its own estimates of average hours.

Denmark has not published estimates of average hours for 1994–96; therefore, the BLS measure of labor input for Denmark ends in 1993.

Total compensation (labor cost) includes all payments in cash or in-kind made directly to employees plus employer expenditures for legally required insurance programs and contractual and private benefit plans. The measures are from the national accounts of each country, except those for Belgium, which are developed by BLS using

statistics on employment, average hours, and hourly compensation. For France and Sweden, compensation is increased to account for other significant taxes on payroll or employment. For the United Kingdom, compensation is reduced between 1967 and 1991 to account for employment-related subsidies. Self-employed workers are included in the all-employed-persons measures by assuming that their hourly compensation is equal to the average for wage and salary employees.

Notes on the data

In general, the measures relate to total manufacturing as defined by the International Standard Industrial Classification. However, the measures for France (for all years) and Italy (beginning 1970) refer to mining and manufacturing less energy-related products, and the measures for Denmark include mining and exclude manufacturing handicrafts from 1960 to 1966.

The measures for recent years may be based on current indicators of manufacturing output (such as industrial production indexes), employment, average hours, and hourly compensation until national accounts and other statistics used for the long-term measures become available.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 606–5654

Occupational Injury and Illness Data

(Table 45)

Survey of Occupational Injuries and Illnesses

Description of the series

The Survey of Occupational Injuries and Illnesses collects data from employers about their workers' job-related nonfatal injuries and illnesses. The information that employers provide is based on records that they maintain under the Occupational Safety and Health Act of 1970. Self-employed individuals, farms with fewer than 11 employees, employers regulated by other Federal safety and health laws, and Federal, State, and local government agencies are excluded from the survey.

The survey is a Federal-State cooperative program with an independent sample selected for each participating State. A stratified random sample with a Neyman allocation is selected to represent all private industries in the State. The survey is stratified by Standard Industrial Classification (SIC) and size of employment.

Definitions

Under the Occupational Safety and Health Act, employers maintain records of nonfatal work-related injuries and illnesses that involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment other than first aid.

Occupational injury is any injury such as a cut, fracture, sprain, or amputation that results from a work-related event or a single, instantaneous exposure in the work environment.

Occupational illness is an abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to factors associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion, or direct contact.

Lost workday injuries and illnesses are cases that involve days away from work, or days of restricted work activity, or both.

Lost workdays include the number of workdays (consecutive or not) on which the employee was either away from work or at work in some restricted capacity, or both, because of an occupational injury or illness. BLS measures of the number and incidence rate of lost workdays were discontinued beginning with the 1993 survey. The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked, such as a Federal holiday, even though able to work.

Incidence rates are computed as the number of injuries and/or illnesses or lost work days per 100 full-time workers.

Notes on the data

The definitions of occupational injuries and illnesses are from *Recordkeeping Guidelines for Occupational Injuries and Illnesses* (U.S. Department of Labor, Bureau of Labor Statistics, September 1986).

Estimates are made for industries and employment size classes for total recordable cases, lost workday cases, days away from work cases, and nonfatal cases without lost workdays. These data also are shown separately for injuries. Illness data are available for seven categories: Occupational skin diseases or disorders, dust diseases of the lungs, respiratory conditions due to toxic agents, poisoning (systemic effects of toxic agents), disorders due to physical agents (other than toxic materials), disorders associated with repeated trauma, and all other occupational illnesses.

The survey continues to measure the number of new work-related illness cases which are recognized, diagnosed, and reported during the year. Some conditions, for example, long-term latent illnesses caused by exposure to carcinogens, often are difficult to relate to the workplace and are not adequately recognized and reported. These long-term latent illnesses are believed to be understated in the survey's illness measure. In contrast, the overwhelming majority of the reported new illnesses are those which are easier to directly relate to workplace activity (for example., contact dermatitis and carpal tunnel syndrome).

Most of the estimates are in the form of incidence rates, defined as the number of injuries and illnesses per 100 equivalent full-time workers. For this purpose, 200,000 employee hours represent 100 employee years (2,000 hours per employee). Full detail on the available measures is presented in the annual bulletin, *Occupational Injuries and Illnesses: Counts, Rates, and Characteristics.*

Comparable data for more than 40 States and territories are available from the BLS Office of Safety, Health and Working Conditions. Many of these States publish data on State and local government employees in addition to private industry data.

Mining and railroad data are furnished to BLS by the Mine Safety and Health Administration and the Federal Railroad Administration. Data from these organizations are included in both the national and State data published annually.

With the 1992 survey, BLS began publishing details on serious, nonfatal incidents resulting in days away from work. Included are some major characteristics of the injured and ill workers, such as occupation, age, gender, race, and length of service, as well as the circumstances of their injuries and illnesses (nature of the disabling condition, part of body affected, event and exposure, and the source directly producing the condition). In general, these data are available nationwide for detailed industries and for individual States at more aggregated industry levels.

FOR ADDITIONAL INFORMATION on occupational injuries and illnesses, contact the *Office of Occupational Safety, Health and Working Conditions* at (202) 606–6180, or access the BLS Internet site at: http://www.bls.gov/oshhome.htm.

Census of Fatal Occupational Injuries

(Table 46)

The Census of Fatal Occupational Injuries compiles a complete roster of fatal job-related injuries, including detailed data about the fatally injured workers and the fatal events. The program collects and cross checks fatality information from multiple sources, including death certificates, State and Federal workers' compensation reports, Occupational Safety and Health Administra-

tion and Mine Safety and Health Administration records, medical examiner and autopsy reports, media accounts, State motor vehicle fatality records, and follow-up questionnaires to employers.

In addition to private wage and salary workers, the self-employed, family members, and Federal, State, and local government workers are covered by the program. Institutionalized persons, such as prison inmates, are excluded. To be included in the fatality census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job.

Definition

A fatal work injury is any intentional or unintentional wound or damage to the body resulting in death from acute exposure to energy, such as heat or electricity or kinetic energy from a crash, or from the absence of such essentials as heat or oxygen caused by a specific event or incident or series of events within a single workday or shift. Fatalities that occur during a person's commute to or from work are excluded from the census, as well as work-related illnesses, which can be difficult to identify due to long latency periods.

Notes on the data

Twenty-eight data elements are collected, coded, and tabulated in the fatality program, including information about the fatally injured worker, the fatal incident, and the machinery or equipment involved. Summary worker demographic data and event characteristics are included in a national news release that is available about 8 months after the end of the reference year. The Census of Fatal Occupational Injuries was initiated in 1992 as a joint Federal-State effort. Most States issue summary information at the time of the national news release.

For more information on the Census of Fatal Occupational Injuries contact the BLS Office of Safety, Health, and Working Conditions at (202) 606–6175, or access the BLS Internet site at: http://www.bls.gov/oshhome.htm

1. Labor market indicators

Selected indicators	1995	1996	1995	1996				1997		
			IV	I	II	III	IV	I	II	III
Employment data										
Employment status of the civilian noninstitutionalized population (household survey):[1]										
Labor force participation rate	66.6	66.8	66.4	66.6	66.7	66.8	66.9	67.2	67.1	67.1
Employment-population ratio	62.9	63.2	62.8	62.9	63.1	63.3	63.4	63.6	63.8	63.8
Unemployment rate	5.6	5.4	5.5	5.6	5.4	5.3	5.3	5.3	4.9	4.9
Men	5.6	5.4	5.6	5.6	5.5	5.2	5.2	5.2	4.8	4.8
16 to 24 years	12.5	12.6	12.9	13.0	12.7	12.4	12.3	12.4	11.4	11.8
25 years and over	4.3	4.1	4.2	4.3	4.1	3.9	3.9	3.9	3.6	3.5
Women	5.6	5.4	5.5	5.5	5.4	5.3	5.4	5.4	5.1	5.0
16 to 24 years	11.6	11.3	11.6	11.9	11.1	11.1	11.2	11.5	11.1	10.4
25 years and over	4.4	4.3	4.3	4.3	4.3	4.2	4.3	4.2	3.9	4.0
Employment, nonfarm (payroll data), in thousands:[1]										
Total	117,191	119,523	117,949	118,471	119,248	119,898	120,452	121,138	121,854	122,538
Private sector	97,885	100,076	98,610	99,111	99,831	100,392	100,953	101,598	102,259	102,795
Goods-producing	24,265	24,431	24,293	24,336	24,428	24,447	24,509	24,635	24,694	24,747
Manufacturing	18,524	18,457	18,488	18,473	18,467	18,443	18,444	18,476	18,504	18,541
Service-producing	92,925	95,092	93,656	94,135	94,821	95,451	95,943	96,504	97,159	97,791
Average hours:										
Private sector	34.5	34.4	34.4	34.2	34.4	34.5	34.5	34.7	34.5	34.5
Manufacturing	41.6	41.6	41.4	40.9	41.6	41.7	41.8	41.9	42.0	41.9
Overtime	4.4	4.5	4.3	4.3	4.5	4.5	4.6	4.8	4.8	4.7
Employment Cost Index										
Percent change in the ECI, compensation:										
All workers (excluding farm, household and Federal workers)	2.7	2.9	.5	.9	.7	.8	.5	.8	.6	–
Private industry workers	2.6	3.1	.4	.9	.9	.6	.6	.8	.8	–
Goods-producing[2]	2.4	2.8	.6	.7	.9	.6	.6	.4	1.0	–
Service-producing[2]	2.8	3.2	.3	1.1	.8	.7	.5	1.1	.7	–
State and local government workers	2.9	2.6	.5	.5	.2	1.3	.6	.4	.1	–
Workers by bargaining status (private industry):										
Union	2.8	2.4	.7	.6	.9	.3	.5	.2	.6	–
Nonunion	2.7	3.1	.4	.9	.8	.8	.5	1.1	.8	–

[1] Quarterly data seasonally adjusted.

[2] Goods-producing industries include mining, construction, and manufacturing. Service-producing industries include all other private sector industries.

– Data not available.

2. Annual and quarterly percent changes in compensation, prices, and productivity

Selected measures	1995	1996	1995		1996				1997	
			III	IV	I	II	III	IV	I	II
Compensation data[1,2]										
Employment Cost Index—compensation (wages, salaries, benefits):										
Civilian nonfarm	2.7	2.9	0.8	0.5	0.9	0.7	0.8	0.5	0.8	0.6
Private nonfarm	2.6	3.1	.6	.4	.9	.9	.6	.6	.8	.8
Employment Cost Index—wages and salaries:										
Civilian nonfarm	2.9	3.3	.8	.6	1.0	.8	.9	.6	.9	.7
Private nonfarm	2.8	3.4	.7	.6	1.1	1.0	.7	.6	1.0	.9
Price data[1]										
Consumer Price Index (All Urban Consumers): All Items	2.5	3.3	.5	.2	1.4	.6	.7	.5	.9	.2
Producer Price Index:										
Finished goods	2.3	2.8	–.2	.9	.8	1.2	.1	.7	–.5	–.4
Finished consumer goods	2.3	3.6	–.1	.6	1.0	1.6	.3	.6	–.6	–.2
Capital equipment	2.2	.4	–.5	1.8	.1	–.1	–.7	1.0	.1	–.5
Intermediate materials, supplies, and components	3.3	.7	.1	–.6	–.2	1.0	.4	–.6	–.3	.1
Crude materials	5.5	14.7	–.9	3.4	3.8	3.0	–.4	7.7	–11.5	–.4
Productivity data[3]										
Output per hour of all persons:										
Business sector	.0	1.5	.7	2.0	2.2	2.5	–1.1	1.9	1.8	2.7
Nonfarm business sector	.2	1.3	1.1	1.6	1.9	2.2	–1.0	1.8	1.4	2.7
Nonfinancial corporations[4]	.8	2.4	4.8	2.1	1.3	3.3	2.3	2.0	1.9	3.2

[1] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter. Compensation and price data are not seasonally adjusted, and the price data are not compounded.

[2] Excludes Federal and private household workers.

[3] Annual rates of change are computed by comparing annual averages. Quarterly percent changes reflect annual rates of change in quarterly indexes. The data are seasonally adjusted.

[4] Output per hour of all employees.

3. Alternative measures of wage and compensation changes

Components	Quarterly average						Four quarters ending—					
	1996				1997		1996				1997	
	I	II	III	IV	I	II	I	II	III	IV	I	II
Average hourly compensation:[1]												
All persons, business sector	2.7	4.7	3.3	3.3	4.4	3.2	2.9	3.3	3.5	3.5	3.9	3.5
All persons, nonfarm business sector	2.8	4.4	2.9	3.3	4.5	3.2	2.9	3.2	3.3	3.3	3.8	3.5
Employment Cost Index—compensation:												
Civilian nonfarm[2]	.9	.7	.8	.5	.8	.6	2.8	2.9	2.8	2.9	2.9	2.8
Private nonfarm	.9	.9	.6	.6	.8	.8	2.7	2.9	2.9	3.1	3.0	2.9
Union	.6	.9	.3	.5	.2	.6	2.7	3.1	2.6	2.4	1.9	1.6
Nonunion	.9	.8	.8	.5	1.1	.8	2.7	2.8	2.9	3.1	3.2	3.2
State and local governments	.5	.2	1.3	.6	.4	.1	2.8	2.6	2.5	2.6	2.5	2.4
Employment Cost Index—wages and salaries:												
Civilian nonfarm[2]	1.0	.8	.9	.6	.9	.7	3.1	3.2	3.2	3.3	3.3	3.2
Private nonfarm	1.1	1.0	.7	.6	1.0	.9	3.2	3.4	3.3	3.4	3.4	3.3
Union	.5	1.1	.5	.5	.5	.7	2.5	3.0	2.7	2.6	2.6	2.2
Nonunion	1.2	.9	.8	.6	1.1	.9	3.3	3.4	3.5	3.6	3.4	3.5
State and local governments	.4	.2	1.6	.6	.4	.1	2.8	2.8	2.8	2.8	2.8	2.7

[1] Seasonally adjusted. "Quarterly average" is percent change from a quarter ago, at an annual rate.

[2] Excludes Federal and household workers.

4. Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
TOTAL															
Civilian noninstitutional population[1]	198,584	200,591	201,061	201,273	201,463	201,636	202,285	202,388	202,513	202,674	202,832	203,000	203,166	203,364	203,570
Civilian labor force	132,304	133,943	134,291	134,636	134,831	135,022	135,848	135,634	136,319	136,098	136,173	136,200	136,290	136,480	136,467
Participation rate	66.6	66.8	66.8	66.9	66.9	67.0	67.2	67.0	67.3	67.2	67.1	67.1	67.1	67.1	67.0
Employed	124,900	126,708	127,248	127,617	127,644	127,855	128,580	128,430	129,175	129,384	129,639	129,364	129,708	129,804	129,715
Employment-population ratio[2]	62.9	63.2	63.3	63.4	63.4	63.4	63.6	63.5	63.8	63.8	63.9	63.7	63.8	63.8	63.7
Unemployed	7,404	7,236	7,043	7,019	7,187	7,167	7,268	7,205	7,144	6,714	6,534	6,836	6,583	6,677	6,752
Unemployment rate	5.6	5.4	5.2	5.2	5.3	5.3	5.4	5.3	5.2	4.9	4.8	5.0	4.8	4.9	4.9
Not in the labor force	66,280	66,647	66,770	66,637	66,632	66,614	66,437	66,754	66,194	66,577	66,659	66,800	66,876	66,884	67,102
Men, 20 years and over															
Civilian noninstitutional population[1]	87,811	88,606	88,733	88,840	88,971	89,040	89,446	89,556	89,604	89,680	89,776	89,829	89,888	89,982	90,068
Civilian labor force	67,324	68,044	68,056	68,273	68,391	68,369	68,998	68,827	69,111	69,147	69,059	69,167	69,203	69,301	69,171
Participation rate	76.7	76.8	76.7	76.8	76.9	76.8	77.1	76.9	77.1	77.1	76.9	77.0	77.0	77.0	76.8
Employed	64,085	64,897	64,978	65,299	65,349	65,367	65,813	65,818	66,066	66,243	66,418	66,266	66,414	66,491	66,325
Employment-population ratio[2]	73.0	73.2	73.2	73.5	73.4	73.4	73.6	73.5	73.7	73.9	74.0	73.8	73.9	73.9	73.6
Agriculture	2,335	2,356	2,366	2,400	2,355	2,356	2,364	2,276	2,362	2,428	2,421	2,417	2,411	2,300	2,407
Nonagricultural industries	61,750	62,541	62,612	62,899	62,994	63,011	63,449	63,542	63,703	63,815	63,997	63,849	64,003	64,191	63,918
Unemployed	3,239	3,146	3,078	2,974	3,042	3,002	3,185	3,009	3,045	2,904	2,640	2,901	2,789	2,810	2,846
Unemployment rate	4.8	4.6	4.5	4.4	4.4	4.4	4.6	4.4	4.4	4.2	3.8	4.2	4.0	4.1	4.1
Women, 20 years and over															
Civilian noninstitutional population[1]	96,262	97,050	97,226	97,290	97,366	97,457	97,520	97,571	97,638	97,685	97,767	97,834	97,919	98,000	98,082
Civilian labor force	57,215	58,094	58,349	58,432	58,574	58,728	58,894	58,743	59,130	58,974	59,130	59,207	59,186	59,408	59,483
Participation rate	59.4	59.9	60.0	60.1	60.2	60.3	60.4	60.2	60.6	60.4	60.5	60.5	60.4	60.6	60.6
Employed	54,396	55,311	55,644	55,681	55,753	55,871	56,165	55,954	56,359	56,392	56,481	56,585	56,685	56,819	56,882
Employment-population ratio[2]	56.5	57.0	57.2	57.2	57.3	57.3	57.6	57.3	57.7	57.7	57.8	57.8	57.9	58.0	58.0
Agriculture	830	827	844	800	786	772	797	775	739	779	743	740	841	836	841
Nonagricultural industries	53,566	54,484	54,800	54,881	54,967	55,099	55,369	55,179	55,620	55,613	55,738	55,845	55,844	55,983	56,041
Unemployed	2,819	2,783	2,705	2,751	2,821	2,857	2,729	2,788	2,771	2,581	2,650	2,621	2,501	2,589	2,601
Unemployment rate	4.9	4.8	4.6	4.7	4.8	4.9	4.6	4.7	4.7	4.4	4.5	4.4	4.2	4.4	4.4
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	14,511	14,934	15,101	15,143	15,126	15,139	15,318	15,261	15,271	15,309	15,300	15,336	15,359	15,382	15,420
Civilian labor force	7,765	7,806	7,886	7,931	7,866	7,925	7,956	8,065	8,078	7,977	7,984	7,826	7,901	7,771	7,813
Participation rate	53.5	52.3	52.2	52.4	52.0	52.3	51.9	52.8	52.9	52.1	52.2	51.0	51.4	50.5	50.7
Employed	6,419	6,500	6,626	6,637	6,542	6,617	6,601	6,657	6,750	6,748	6,740	6,512	6,608	6,493	6,508
Employment-population ratio[2]	44.2	43.5	43.9	43.8	43.3	43.7	43.1	43.6	44.2	44.1	44.1	42.5	43.0	42.2	42.2
Agriculture	275	261	270	250	213	298	307	240	285	290	266	234	229	246	202
Nonagricultural industries	6,144	6,239	6,356	6,387	6,329	6,319	6,294	6,417	6,465	6,458	6,474	6,279	6,379	6,247	6,306
Unemployed	1,346	1,306	1,260	1,294	1,324	1,308	1,354	1,408	1,328	1,229	1,244	1,314	1,293	1,278	1,305
Unemployment rate	17.3	16.7	16.0	16.3	16.8	16.5	17.0	17.5	16.4	15.4	15.6	16.8	16.4	16.4	16.7
White															
Civilian noninstitutional population[1]	166,914	168,317	168,639	168,788	168,924	169,044	169,436	169,492	169,569	169,675	169,782	169,897	170,010	170,148	170,290
Civilian labor force	111,950	113,108	113,334	113,625	113,816	113,991	114,377	114,333	114,736	114,618	114,630	114,691	114,627	114,649	114,694
Participation rate	67.1	67.2	67.2	67.3	67.4	67.4	67.5	67.5	67.7	67.6	67.5	67.5	67.4	67.4	67.4
Employed	106,490	107,808	108,217	108,527	108,570	108,734	109,151	109,197	109,630	109,831	110,052	109,821	109,853	109,782	109,770
Employment-population ratio[2]	63.8	64.1	64.2	64.3	64.3	64.3	64.4	64.4	64.7	64.7	64.8	64.6	64.6	64.6	64.5
Unemployed	5,459	5,300	5,117	5,098	5,246	5,257	5,226	5,136	5,106	4,786	4,578	4,870	4,774	4,867	4,924
Unemployment rate	4.9	4.7	4.5	4.5	4.6	4.6	4.6	4.5	4.5	4.2	4.0	4.2	4.2	4.2	4.3
Black															
Civilian noninstitutional population[1]	23,246	23,604	23,690	23,728	23,762	23,794	23,847	23,872	23,895	23,923	23,950	23,978	24,006	24,043	24,081
Civilian labor force	14,817	15,134	15,184	15,276	15,290	15,306	15,372	15,408	15,439	15,365	15,434	15,398	15,510	15,804	15,746
Participation rate	63.7	64.1	64.1	64.4	64.3	64.3	64.5	64.5	64.6	64.2	64.4	64.2	64.6	65.7	65.4
Employed	13,279	13,542	13,566	13,647	13,673	13,693	13,709	13,672	13,784	13,863	13,837	13,793	14,055	14,341	14,236
Employment-population ratio[2]	57.1	57.4	57.3	57.5	57.5	57.5	57.5	57.3	57.7	57.9	57.8	57.5	58.5	59.6	59.1
Unemployed	1,538	1,592	1,618	1,629	1,617	1,613	1,663	1,736	1,655	1,503	1,597	1,605	1,455	1,463	1,510
Unemployment rate	10.4	10.5	10.7	10.7	10.6	10.5	10.8	11.3	10.7	9.8	10.3	10.4	9.4	9.3	9.6

See footnotes at end of table.

4. Continued—Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sept.
Hispanic origin															
Civilian noninstitutional population[1]	18,629	19,213	19,346	19,398	19,454	19,505	20,013	20,067	20,119	20,180	20,236	20,293	20,351	20,407	20,464
Civilian labor force	12,267	12,774	12,871	12,989	13,182	13,150	13,795	13,640	13,662	13,572	13,746	13,807	13,866	13,910	13,827
Participation rate	65.8	66.5	66.5	67.0	67.8	67.4	68.9	68.0	67.9	67.3	67.9	68.0	68.1	68.2	67.6
Employed	11,127	11,642	11,801	11,928	12,094	12,141	12,653	12,538	12,493	12,470	12,730	12,756	12,768	12,911	12,780
Employment-population ratio[2]	59.7	60.6	61.0	61.5	62.2	62.2	63.2	62.5	62.1	61.8	62.9	62.9	62.7	63.3	62.5
Unemployed	1,140	1,132	1,070	1,061	1,088	1,009	1,142	1,102	1,169	1,102	1,016	1,051	1,098	999	1,047
Unemployment rate	9.3	8.9	8.3	8.2	8.3	7.7	8.3	8.1	8.6	8.1	7.4	7.6	7.9	7.2	7.6

[1] The population figures are not seasonally adjusted.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" groups are not presented and Hispanics are included in both the white and black population groups.

5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

Selected categories	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov,	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Characteristic															
Employed, 16 years and over	124,900	126,708	127,248	127,617	127,644	127,855	128,580	128,430	129,175	129,384	129,639	129,364	129,708	129,804	129,715
Men	67,377	68,207	68,304	68,647	68,589	68,707	69,164	69,232	69,478	69,627	69,929	69,567	69,749	69,791	69,639
Women	57,523	58,501	58,944	58,970	59,055	59,148	59,416	59,197	59,697	59,756	59,710	59,796	59,958	60,013	60,076
Married men, spouse present	42,048	42,417	42,330	42,617	42,631	42,607	42,909	42,513	42,509	42,329	42,273	42,448	42,589	42,697	42,527
Married women, spouse present	32,063	32,406	32,679	32,537	32,509	32,631	32,826	32,578	32,699	32,473	32,445	32,519	32,866	32,933	32,843
Women who maintain families	7,164	7,363	7,420	7,392	7,444	7,500	7,501	7,556	7,720	7,838	7,858	7,847	7,901	7,941	7,891
Class of worker															
Agriculture:															
Wage and salary workers	1,814	1,869	1,834	1,813	1,829	1,878	1,988	1,932	1,905	1,989	1,941	1,929	1,913	1,841	1,896
Self-employed workers	1,580	1,518	1,557	1,560	1,464	1,475	1,448	1,353	1,414	1,424	1,444	1,404	1,492	1,487	1,527
Unpaid family workers	45	56	91	71	68	66	62	15	59	70	50	40	53	51	40
Nonagricultural industries:															
Wage and salary workers	112,448	114,171	114,765	115,018	115,133	115,212	115,560	115,987	116,533	116,608	116,969	116,653	117,104	117,323	117,286
Government	18,362	18,217	18,092	18,132	18,270	18,266	18,385	18,144	17,994	18,036	17,807	18,099	18,338	18,254	18,033
Private industries	94,086	95,954	96,673	96,886	96,863	96,946	97,176	97,843	98,539	98,572	99,162	98,554	98,766	99,069	99,253
Private households	963	928	981	992	956	934	1,002	882	869	922	967	870	910	946	864
Other	93,123	95,025	95,692	95,894	95,907	96,012	96,174	96,962	97,671	97,650	98,195	97,684	97,856	98,122	98,389
Self-employed workers	8,902	8,971	8,811	8,967	9,023	9,109	9,445	9,124	9,292	9,159	9,106	9,126	8,887	8,923	8,926
Unpaid family workers	110	122	129	137	140	149	162	136	108	130	148	128	131	129	81
Persons at work part time[1]															
All industries:															
Part time for economic reasons	4,473	4,315	4,302	4,286	3,983	4,338	4,426	4,262	4,153	4,402	4,019	4,025	4,017	3,992	3,916
Slack work or business conditions	2,471	2,388	2,398	2,258	2,107	2,353	2,423	2,378	2,344	2,491	2,300	2,375	2,211	2,122	2,159
Could only find part-time work	1,702	1,605	1,617	1,683	1,559	1,653	1,552	1,550	1,518	1,629	1,391	1,347	1,522	1,519	1,476
Part time for noneconomic reasons	17,734	17,770	17,823	17,754	17,957	17,868	18,340	18,070	18,120	18,176	18,336	18,322	18,015	18,093	17,690
Nonagricultural industries:															
Part time for economic reasons	4,279	4,123	4,130	4,118	3,815	4,162	4,163	4,098	3,937	4,235	3,806	3,782	3,872	3,854	3,728
Slack work or business conditions	2,346	2,263	2,284	2,147	2,001	2,214	2,310	2,277	2,210	2,374	2,159	2,220	2,102	2,037	2,040
Could only find part-time work	1,663	1,576	1,580	1,647	1,543	1,622	1,512	1,523	1,475	1,603	1,347	1,298	1,509	1,485	1,435
Part time for noneconomic reasons	17,093	17,150	17,204	17,123	17,313	17,237	17,737	17,452	17,565	17,661	17,780	17,663	17,418	17,519	17,180

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial disputes.

6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Characteristic															
Total, all workers	5.6	5.4	5.2	5.2	5.3	5.3	5.4	5.3	5.2	4.9	4.8	5.0	4.8	4.9	4.9
Both sexes, 16 to 19 years	17.3	16.7	16.0	16.3	16.8	16.5	17.0	17.5	16.4	15.4	15.6	16.8	16.4	16.4	16.7
Men, 20 years and over	4.8	4.6	4.5	4.4	4.4	4.4	4.6	4.4	4.4	4.2	3.8	4.2	4.0	4.1	4.1
Women, 20 years and over	4.9	4.8	4.6	4.7	4.8	4.9	4.6	4.7	4.7	4.4	4.5	4.4	4.2	4.4	4.4
White, total	4.9	4.7	4.5	4.5	4.6	4.6	4.6	4.5	4.5	4.2	4.0	4.2	4.2	4.2	4.3
Both sexes, 16 to 19 years	14.5	14.2	13.4	13.6	14.1	13.7	14.3	14.6	14.1	13.1	12.7	14.5	14.9	14.4	14.4
Men, 16 to 19 years	15.6	15.5	14.8	15.4	15.5	14.8	14.9	14.6	15.0	14.3	12.7	16.3	15.4	15.5	14.6
Women, 16 to 19 years	13.4	12.9	11.9	11.6	12.6	12.6	13.6	14.7	13.1	11.9	12.7	12.6	14.3	13.2	14.1
Men, 20 years and over	4.3	4.1	3.9	3.8	3.9	3.9	4.0	3.9	3.8	3.6	3.2	3.6	3.5	3.6	3.6
Women, 20 years and over	4.3	4.1	4.0	4.0	4.2	4.3	3.9	3.9	3.9	3.6	3.7	3.7	3.5	3.7	3.7
Black, total	10.4	10.5	10.7	10.7	10.6	10.5	10.8	11.3	10.7	9.8	10.3	10.4	9.4	9.3	9.6
Both sexes, 16 to 19 years	35.7	33.6	34.0	34.2	35.4	34.7	34.8	34.3	32.1	31.2	33.2	32.7	28.6	29.4	33.1
Men, 16 to 19 years	37.1	36.9	37.2	36.5	41.2	38.6	42.7	37.4	41.4	37.3	32.6	41.1	32.9	33.1	38.7
Women, 16 to 19 years	34.3	30.3	30.9	31.9	30.0	31.2	27.5	31.3	23.7	25.3	33.8	24.5	25.1	26.2	28.4
Men, 20 years and over	8.8	9.4	9.7	9.3	9.2	8.8	9.2	9.0	9.3	8.4	8.4	9.1	8.2	7.5	7.8
Women, 20 years and over	8.6	8.7	8.7	8.9	8.9	9.2	9.2	10.3	9.2	8.4	9.4	9.1	8.3	8.4	8.4
Hispanic origin, total	9.3	8.9	8.3	8.2	8.3	7.7	8.3	8.1	8.6	8.1	7.4	7.6	7.9	7.2	7.6
Married men, spouse present	3.3	3.0	3.0	3.0	3.0	3.0	2.8	2.8	2.8	2.7	2.6	2.7	2.6	2.6	2.7
Married women, spouse present	3.9	3.6	3.4	3.5	3.6	3.7	3.3	3.4	3.2	3.1	3.2	3.2	3.1	3.0	3.1
Women who maintain families	8.0	8.2	8.3	8.5	8.8	8.4	9.1	9.0	9.1	7.5	7.6	8.0	7.4	8.1	7.7
Full-time workers	5.5	5.3	5.1	5.1	5.3	5.2	5.2	5.1	5.1	4.8	4.7	4.9	4.7	4.7	4.8
Part-time workers	6.0	5.8	5.6	5.6	5.6	5.8	5.7	6.0	5.7	5.7	5.2	5.3	5.4	5.6	5.5
Industry															
Nonagricultural wage and salary workers	5.8	5.5	5.3	5.3	5.5	5.4	5.4	5.3	5.2	5.0	5.0	5.0	4.9	5.0	5.1
Mining	5.2	5.1	5.1	5.8	4.9	7.6	6.0	4.2	4.0	2.0	3.0	2.3	3.8	5.3	2.9
Construction	11.5	10.1	9.3	9.6	10.3	9.4	10.1	9.0	9.6	8.7	8.4	8.5	8.7	9.3	8.6
Manufacturing	4.9	4.8	4.4	4.7	4.7	4.8	4.6	4.5	4.3	4.4	4.2	4.1	4.3	4.1	4.2
Durable goods	4.4	4.5	4.2	4.4	4.5	4.7	4.4	4.0	3.6	3.6	3.5	3.5	3.4	3.6	3.3
Nondurable goods	5.7	5.2	4.7	5.1	5.1	5.0	4.8	5.3	5.2	5.8	5.3	5.0	5.5	4.9	5.5
Transportation and public utilities	4.5	4.1	4.1	4.4	3.5	4.0	4.1	4.3	4.1	2.8	3.6	2.9	3.4	3.9	3.9
Wholesale and retail trade	6.5	6.4	6.2	6.2	6.3	6.2	6.4	6.5	6.3	6.2	6.1	6.5	6.0	6.2	6.3
Finance, insurance, and real estate	3.3	2.7	3.0	2.9	2.9	3.1	3.5	3.0	3.2	3.4	3.2	2.5	3.2	3.0	3.0
Services	5.4	5.4	5.3	5.0	5.3	5.2	4.9	5.0	4.8	4.6	4.6	4.8	4.3	4.5	4.7
Government workers	2.9	2.9	3.0	2.9	2.8	3.0	2.9	2.9	2.8	2.4	2.4	2.9	2.8	2.6	2.6
Agricultural wage and salary workers	11.1	10.2	10.8	10.0	10.9	10.3	8.6	8.8	9.5	9.6	7.1	10.6	7.5	9.5	8.9

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Less than 5 weeks	2,700	2,633	2,522	2,556	2,819	2,671	2,801	2,591	2,650	2,354	2,523	2,538	2,352	2,598	2,470
5 to 14 weeks	2,342	2,287	2,245	2,265	2,252	2,357	2,223	2,382	2,380	2,156	2,022	2,211	2,071	2,134	2,142
15 weeks and over	2,363	2,316	2,277	2,294	2,184	2,179	2,155	2,163	2,064	2,092	2,071	2,063	2,157	2,012	2,127
15 to 26 weeks	1,085	1,053	1,040	1,062	1,018	976	943	1,025	1,001	1,058	1,078	1,045	1,082	931	1,035
27 weeks and over	1,278	1,262	1,237	1,232	1,166	1,203	1,212	1,138	1,063	1,034	993	1,018	1,074	1,082	1,092
Mean duration, in weeks	16.6	16.7	16.9	16.7	16.0	15.8	16.0	16.0	15.3	15.2	15.1	15.1	16.6	15.9	16.0
Median duration, in weeks	8.3	8.3	8.6	8.3	7.7	7.8	7.7	8.4	7.9	8.3	7.7	7.7	8.5	7.8	8.4

8. Unemployed persons by reason for unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Job losers[1]	3,476	3,370	3,236	3,171	3,261	3,221	3,245	3,163	3,187	2,979	2,902	3,145	2,903	3,064	3,017
On temporary layoff	1,030	1,021	989	957	994	987	953	944	1,021	976	871	925	877	865	878
Not on temporary layoff	2,446	2,349	2,247	2,214	2,267	2,234	2,293	2,218	2,167	2,003	2,031	2,220	2,026	2,199	2,140
Job leavers	824	774	800	797	825	845	890	787	784	754	801	829	822	915	868
Reentrants	2,525	2,512	2,441	2,489	2,523	2,556	2,505	2,648	2,535	2,420	2,306	2,359	2,244	2,144	2,259
New entrants	579	580	559	577	586	626	600	647	647	577	574	481	553	544	561
Percent of unemployed															
Job losers[1]	46.9	46.6	46.0	45.1	45.3	44.4	44.8	43.7	44.6	44.3	44.1	46.2	44.5	46.0	45.0
On temporary layoff	13.9	14.1	14.1	13.6	13.8	13.6	13.2	13.0	14.3	14.5	13.2	13.6	13.4	13.0	13.1
Not on temporary layoff	33.0	32.5	31.9	31.5	31.5	30.8	31.7	30.6	30.3	29.8	30.9	32.6	31.1	33.0	31.9
Job leavers	11.1	10.7	11.4	11.3	11.5	11.7	12.3	10.9	11.0	11.2	12.2	12.2	12.6	13.7	12.9
Reentrants	34.1	34.7	34.7	35.4	35.1	35.3	34.6	36.6	35.4	36.0	35.0	34.6	34.4	32.2	33.7
New entrants	7.8	8.0	7.9	8.2	8.1	8.6	8.3	8.9	9.0	8.6	8.7	7.1	8.5	8.2	8.4
Percent of civilian labor force															
Job losers[1]	2.6	2.5	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.1	2.3	2.1	2.2	2.2
Job leavers	.6	.6	.6	.6	.6	.6	.7	.6	.6	.6	.6	.6	.6	.7	.6
Reentrants	1.9	1.9	1.8	1.8	1.9	1.9	1.8	2.0	1.9	1.8	1.7	1.7	1.6	1.6	1.7
New entrants	.4	.4	.4	.4	.4	.5	.4	.5	.5	.4	.4	.4	.4	.4	.4

[1] Includes persons who completed temporary jobs.

9. Unemployment rates by sex and age, monthly data seasonally adjusted

[Civilian workers]

Sex and age	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Total, 16 years and over	5.6	5.4	5.2	5.2	5.3	5.3	5.4	5.3	5.2	4.9	4.8	5.0	4.8	4.9	4.9
16 to 24 years	12.1	12.0	11.5	11.7	11.9	11.9	12.2	12.0	11.8	11.4	10.9	11.5	10.9	11.3	11.3
16 to 19 years	17.3	16.7	16.0	16.3	16.8	16.5	17.0	17.5	16.4	15.4	15.6	16.8	16.4	16.4	16.7
16 to 17 years	20.2	18.9	17.6	18.0	17.0	19.3	17.7	19.7	19.4	18.5	18.4	17.3	17.5	17.7	19.5
18 to 19 years	15.3	15.2	14.7	15.3	17.0	14.7	16.6	15.2	14.6	13.3	13.7	16.3	15.8	15.6	14.6
20 to 24 years	9.1	9.3	8.9	8.9	9.0	9.1	9.4	8.7	9.0	9.0	8.2	8.4	7.7	8.3	8.1
25 years and over	4.3	4.2	4.1	4.0	4.1	4.1	4.0	4.1	4.0	3.7	3.7	3.8	3.7	3.7	3.8
25 to 54 years	4.5	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.1	3.8	3.8	3.9	3.8	3.8	3.9
55 years and over	3.7	3.4	3.3	3.2	3.1	3.3	3.1	3.0	3.3	3.0	2.9	3.1	3.0	3.0	3.1
Men, 16 years and over	5.6	5.4	5.2	5.1	5.2	5.1	5.4	5.1	5.2	4.9	4.5	5.0	4.8	4.8	4.9
16 to 24 years	12.5	12.6	12.1	12.3	12.5	12.3	12.9	12.0	12.2	11.8	10.3	12.1	11.4	12.0	12.1
16 to 19 years	18.4	18.1	17.5	18.1	18.4	17.4	18.4	17.9	17.9	17.2	15.2	19.0	17.2	17.8	17.5
16 to 17 years	21.1	20.8	19.2	19.6	18.9	20.6	20.4	19.6	21.4	20.5	17.8	19.9	18.6	17.5	18.9
18 to 19 years	16.5	16.3	16.2	17.1	19.0	15.4	17.1	15.4	15.7	15.2	13.5	18.2	16.2	18.1	16.5
20 to 24 years	9.2	9.5	9.0	8.9	9.2	9.3	9.8	8.6	8.9	8.7	7.5	8.2	8.1	8.7	9.1
25 years and over	4.3	4.1	4.0	3.8	3.9	3.8	4.0	3.9	3.9	3.7	3.4	3.7	3.5	3.6	3.5
25 to 54 years	4.4	4.2	4.2	4.0	4.0	3.9	4.1	4.0	3.9	3.8	3.5	3.8	3.6	3.6	3.6
55 years and over	3.7	3.3	3.3	3.0	3.1	3.4	3.2	3.3	3.5	3.0	2.8	3.1	3.0	3.0	2.9
Women, 16 years and over	5.6	5.4	5.2	5.3	5.5	5.5	5.3	5.5	5.3	4.9	5.2	5.0	4.9	5.0	5.1
16 to 24 years	11.6	11.3	10.9	11.0	11.3	11.4	11.4	11.9	11.3	10.9	11.6	10.8	10.4	10.5	10.3
16 to 19 years	16.1	15.2	14.4	14.4	15.2	15.5	15.5	16.9	14.9	13.6	16.0	14.4	15.5	15.0	15.8
16 to 17 years	19.2	16.9	16.0	16.2	15.1	18.1	14.9	19.7	17.1	16.5	19.0	14.4	16.4	17.8	20.1
18 to 19 years	14.0	14.0	13.1	13.4	15.0	14.0	16.2	15.0	13.3	11.3	13.8	14.3	15.4	13.1	12.6
20 to 24 years	9.0	9.0	8.7	8.9	8.9	8.9	8.9	8.8	9.1	9.3	8.9	8.6	7.3	7.8	7.1
25 years and over	4.4	4.3	4.2	4.2	4.3	4.5	4.1	4.2	4.2	3.8	4.0	3.9	3.9	4.0	4.1
25 to 54 years	4.5	4.4	4.2	4.4	4.5	4.7	4.3	4.5	4.3	3.9	4.2	4.0	4.1	4.1	4.2
55 years and over	3.6	3.5	3.4	3.4	3.0	3.3	2.9	2.6	3.1	3.0	3.0	3.2	3.0	3.0	3.4

10. Unemployment rates by State, seasonally adjusted

State	Aug. 1996	July 1997	Aug. 1997[p]	State	Aug. 1996	July 1997	Aug. 1997[p]
Alabama	4.9	4.7	4.7	Missouri	4.5	3.6	3.5
Alaska	7.8	7.3	7.6	Montana	5.1	5.1	5.1
Arizona	5.6	4.2	4.5	Nebraska	2.9	2.4	2.5
Arkansas	5.6	5.5	5.4	Nevada	5.5	4.4	4.3
California	7.1	6.2	6.2	New Hampshire	4.2	3.0	2.7
Colorado	4.2	3.1	3.2	New Jersey	6.1	5.4	5.2
Connecticut	5.7	4.8	4.6	New Mexico	8.4	6.4	6.1
Delaware	5.4	4.3	4.2	New York	6.1	6.4	6.4
District of Columbia	8.6	7.4	7.9	North Carolina	4.2	3.7	3.8
Florida	5.0	4.6	4.6	North Dakota	3.1	2.6	2.4
Georgia	4.6	4.4	4.4	Ohio	4.8	4.2	4.2
Hawaii	6.4	6.3	6.1	Oklahoma	4.0	3.8	3.8
Idaho	5.1	4.9	5.2	Oregon	5.9	5.3	5.5
Illinois	5.3	4.7	4.4	Pennsylvania	5.1	5.3	5.3
Indiana	4.0	3.2	3.5	Rhode Island	4.9	5.5	4.9
Iowa	3.8	2.6	2.7	South Carolina	6.2	4.6	4.7
Kansas	4.6	3.9	3.7	South Dakota	3.2	2.8	2.7
Kentucky	5.5	5.3	5.3	Tennessee	5.0	5.5	5.1
Louisiana	6.8	6.4	6.0	Texas	5.5	5.5	5.4
Maine	5.1	5.1	4.7	Utah	3.5	3.0	3.1
Maryland	4.8	4.7	4.4	Vermont	4.6	3.8	3.8
Massachusetts	4.0	3.9	4.3	Virginia	4.3	4.2	4.2
Michigan	4.8	3.9	3.7	Washington	6.5	4.8	5.0
Minnesota	4.1	3.1	3.2	West Virginia	7.3	6.7	6.7
Mississippi	6.0	5.0	5.5	Wisconsin	3.5	3.8	3.6
				Wyoming	5.1	4.9	4.5

[p] = preliminary

11. Employment of workers on nonfarm payrolls by State, seasonally adjusted

[In thousands]

State	Aug. 1996	July 1997	Aug. 1997[p]	State	Aug. 1996	July 1997	Aug. 1997[p]
Alabama	1,828.7	1,845.2	1,845.5	Missouri	2,563.4	2,601.5	2,612.2
Alaska	263.4	267.0	267.0	Montana	357.9	364.4	363.5
Arizona	1,915.3	1,980.5	1,983.0	Nebraska	834.6	853.2	850.4
Arkansas	1,088.3	1,095.6	1,097.0	Nevada	851.2	898.8	896.7
California	12,825.6	13,143.0	13,152.4	New Hampshire	566.3	579.5	575.9
Colorado	1,909.5	1,940.3	1,938.1	New Jersey	3,651.5	3,706.1	3,697.8
Connecticut	1,591.9	1,620.5	1,620.3	New Mexico	695.5	708.2	707.9
Delaware	378.2	388.5	390.0	New York	7,927.7	8,015.0	8,018.1
District of Columbia	622.3	618.1	614.8	North Carolina	3,554.0	3,628.0	3,632.0
Florida	6,202.7	6,404.6	6,411.6	North Dakota	309.4	318.0	318.3
Georgia	3,539.3	3,609.4	3,620.4	Ohio	5,317.9	5,351.6	5,362.5
Hawaii	529.4	527.1	529.2	Oklahoma	1,360.4	1,391.8	1,404.8
Idaho	495.4	502.9	502.2	Oregon	1,483.6	1,529.6	1,529.9
Illinois	5,699.9	5,752.9	5,752.0	Pennsylvania	5,328.8	5,421.7	5,415.9
Indiana	2,819.7	2,842.9	2,847.9	Rhode Island	443.2	443.9	446.2
Iowa	1,381.9	1,404.4	1,403.5	South Carolina	1,680.3	1,707.9	1,707.7
Kansas	1,226.6	1,266.7	1,264.6	South Dakota	349.9	353.9	352.8
Kentucky	1,676.9	1,711.2	1,706.3	Tennessee	2,534.6	2,547.2	2,552.2
Louisiana	1,815.4	1,838.9	1,838.6	Texas	8,270.6	8,465.2	8,487.6
Maine	539.8	549.8	551.2	Utah	961.4	996.8	998.0
Maryland	2,213.5	2,253.8	2,250.4	Vermont	274.4	279.0	278.2
Massachusetts	3,050.3	3,115.0	3,117.7	Virginia	3,141.0	3,212.9	3,218.7
Michigan	4,357.9	4,401.1	4,404.6	Washington	2,425.4	2,508.7	2,510.1
Minnesota	2,440.1	2,489.4	2,488.5	West Virginia	698.8	709.5	710.6
Mississippi	1,097.6	1,099.9	1,101.6	Wisconsin	2,613.4	2,647.6	2,650.0
				Wyoming	223.4	221.7	221.2

[p] = preliminary

NOTE: Some data in this table may differ from data published elsewhere because of the continual updating of the data base.

12. Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[P]	Sept.[P]
TOTAL	117,191	119,523	120,019	120,248	120,450	120,659	120,909	121,162	121,344	121,671	121,834	122,056	122,440	122,480	122,695
PRIVATE SECTOR	97,885	100,076	100,506	100,759	100,956	101,145	101,380	101,615	101,799	102,092	102,269	102,417	102,721	102,685	102,978
GOODS-PRODUCING	24,265	24,431	24,439	24,479	24,508	24,540	24,581	24,653	24,670	24,667	24,702	24,714	24,713	24,771	24,757
Mining	581	574	571	570	571	571	574	574	572	573	576	574	574	572	575
Metal mining	51	54	54	54	54	54	55	54	54	54	54	54	54	54	54
Oil and gas extraction	320	317	316	315	316	316	317	319	317	319	321	320	321	320	322
Nonmetallic minerals, except fuels	105	106	106	108	109	109	108	108	108	107	108	108	108	107	108
Construction	5,160	5,400	5,441	5,467	5,495	5,521	5,542	5,604	5,609	5,599	5,628	5,622	5,625	5,637	5,636
General building contractors	1,207	1,254	1,259	1,265	1,272	1,281	1,287	1,298	1,298	1,297	1,300	1,302	1,308	1,306	1,303
Heavy construction, except building	752	770	771	771	773	772	774	791	777	767	777	766	761	762	761
Special trades contractors	3,201	3,377	3,411	3,431	3,450	3,468	3,481	3,515	3,534	3,535	3,551	3,554	3,556	3,569	3,572
Manufacturing	18,524	18,457	18,427	18,442	18,442	18,448	18,465	18,475	18,489	18,495	18,498	18,518	18,514	18,562	18,546
Production workers	12,826	12,749	12,723	12,731	12,737	12,743	12,758	12,762	12,771	12,774	12,790	12,791	12,792	12,818	12,814
Durable goods	10,683	10,766	10,771	10,780	10,791	10,803	10,821	10,836	10,848	10,856	10,864	10,891	10,910	10,964	10,947
Production workers	7,317	7,370	7,372	7,379	7,390	7,398	7,417	7,427	7,437	7,440	7,454	7,466	7,482	7,530	7,519
Lumber and wood products	769	780	782	785	787	788	789	793	797	799	800	797	796	798	797
Furniture and fixtures	510	504	503	503	504	505	506	507	507	506	508	508	510	506	506
Stone, clay, and glass products	540	541	541	542	541	543	543	543	542	541	540	538	541	541	540
Primary metal industries	712	711	711	707	708	707	708	708	709	710	708	709	708	715	716
Fabricated metal products	1,437	1,448	1,452	1,455	1,457	1,458	1,460	1,462	1,463	1,468	1,468	1,470	1,468	1,475	1,475
Industrial machinery and equipment	2,067	2,112	2,108	2,115	2,115	2,119	2,126	2,132	2,136	2,142	2,146	2,152	2,155	2,165	2,166
Computer and office equipment	352	363	364	364	365	366	367	370	372	375	378	379	381	384	383
Electronic and other electrical equipment	1,625	1,651	1,652	1,650	1,649	1,647	1,645	1,645	1,645	1,643	1,644	1,651	1,658	1,663	1,666
Electronic components and accessories	581	610	610	609	609	609	610	612	614	618	622	628	632	637	641
Transportation equipment	1,790	1,781	1,783	1,783	1,790	1,793	1,802	1,804	1,810	1,804	1,809	1,824	1,826	1,856	1,836
Motor vehicles and equipment	971	963	965	959	960	961	966	964	969	957	960	967	965	985	971
Aircraft and parts	451	460	461	470	475	479	483	487	491	495	498	505	510	514	515
Instruments and related products	843	854	854	855	854	856	854	854	853	855	854	856	859	858	859
Miscellaneous manufacturing industries	390	387	385	385	386	387	388	388	386	388	387	386	389	387	386
Nondurable goods	7,841	7,691	7,656	7,662	7,651	7,645	7,644	7,639	7,641	7,639	7,634	7,627	7,604	7,598	7,599
Production workers	5,508	5,379	5,351	5,352	5,347	5,345	5,341	5,335	5,334	5,334	5,336	5,325	5,310	5,288	5,295
Food and kindred products	1,692	1,693	1,682	1,684	1,688	1,689	1,695	1,694	1,698	1,699	1,693	1,692	1,684	1,679	1,683
Tobacco products	42	41	41	42	42	42	41	42	42	41	41	41	41	40	40
Textile mill products	663	624	618	620	616	615	615	612	612	609	609	607	608	604	607
Apparel and other textile products	936	864	853	849	844	840	835	831	827	822	818	816	810	808	801
Paper and allied products	693	681	678	679	679	678	678	678	677	677	677	675	675	675	676
Printing and publishing	1,546	1,538	1,536	1,539	1,535	1,534	1,534	1,534	1,535	1,541	1,546	1,550	1,549	1,547	1,546
Chemicals and allied products	1,038	1,032	1,029	1,029	1,028	1,028	1,028	1,028	1,028	1,029	1,030	1,027	1,023	1,024	1,027
Petroleum and coal products	145	142	141	141	141	140	139	139	140	140	139	138	138	138	138
Rubber and miscellaneous plastics products	980	981	984	985	985	985	985	987	988	988	988	989	986	993	992
Leather and leather products	106	96	94	94	93	94	94	94	94	93	93	92	90	90	89
SERVICE-PRODUCING	92,925	95,092	95,580	95,769	95,942	96,119	96,328	96,509	96,674	97,004	97,132	97,342	97,727	97,709	97,938
Transportation and public utilities	6,132	6,261	6,290	6,293	6,303	6,288	6,351	6,376	6,405	6,421	6,431	6,434	6,443	6,284	6,451
Transportation	3,904	4,038	4,066	4,072	4,078	4,065	4,121	4,142	4,164	4,179	4,187	4,193	4,202	4,043	4,213
Railroad transportation	238	231	230	230	229	228	228	227	226	225	226	230	229	225	226
Local and interurban passenger transit	419	439	444	445	447	449	452	453	455	460	458	457	461	462	460
Trucking and warehousing	1,587	1,641	1,651	1,648	1,649	1,642	1,656	1,664	1,671	1,676	1,687	1,686	1,692	1,702	1,710
Water transportation	175	173	173	173	173	173	175	175	175	177	176	178	176	179	176
Transportation by air	1,068	1,122	1,134	1,140	1,142	1,133	1,168	1,178	1,191	1,192	1,192	1,192	1,193	1,021	1,187
Pipelines, except natural gas	15	15	14	14	14	14	14	14	14	14	14	14	14	14	14
Transportation services	401	417	420	422	424	426	428	431	432	435	434	436	437	440	440
Communications and public utilities	2,229	2,223	2,224	2,221	2,225	2,223	2,230	2,234	2,241	2,242	2,244	2,241	2,241	2,241	2,238
Communications	1,318	1,338	1,345	1,343	1,347	1,347	1,354	1,358	1,364	1,369	1,372	1,372	1,372	1,376	1,376
Electric, gas, and sanitary services	911	885	879	878	878	876	876	876	877	873	872	869	869	865	862
Wholesale trade	6,378	6,483	6,513	6,538	6,549	6,559	6,570	6,593	6,611	6,622	6,630	6,634	6,664	6,674	6,684
Retail trade	21,187	21,625	21,718	21,791	21,847	21,912	21,917	21,922	21,945	22,029	22,026	22,079	22,159	22,191	22,214
Building materials and garden supplies	868	892	901	905	909	914	914	918	922	931	932	928	930	929	928
General merchandise stores	2,681	2,726	2,739	2,756	2,761	2,769	2,757	2,752	2,783	2,799	2,787	2,798	2,803	2,822	2,822
Department stores	2,346	2,388	2,403	2,416	2,418	2,425	2,420	2,416	2,452	2,446	2,452	2,450	2,458	2,470	2,473

See footnotes at end of table.

12. Continued—Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[P]	Sept.[P]
Food stores	3,366	3,435	3,445	3,458	3,467	3,468	3,474	3,477	3,478	3,480	3,482	3,487	3,502	3,505	3,504
Automotive dealers and service stations	2,190	2,270	2,289	2,295	2,300	2,304	2,307	2,311	2,315	2,319	2,316	2,315	2,318	2,325	2,330
New and used car dealers	996	1,032	1,040	1,043	1,045	1,048	1,051	1,053	1,055	1,055	1,054	1,056	1,055	1,058	1,058
Apparel and accessory stores	1,125	1,101	1,101	1,107	1,107	1,106	1,107	1,103	1,104	1,105	1,099	1,097	1,096	1,102	1,101
Furniture and home furnishings stores	946	985	998	1,003	1,010	1,021	1,020	1,022	1,025	1,026	1,032	1,034	1,042	1,044	1,047
Eating and drinking places	7,354	7,499	7,509	7,516	7,530	7,551	7,552	7,556	7,525	7,571	7,572	7,595	7,639	7,622	7,633
Miscellaneous retail establishments	2,658	2,717	2,736	2,751	2,763	2,779	2,786	2,783	2,793	2,798	2,806	2,825	2,829	2,842	2,849
Finance, insurance, and real estate	6,806	6,899	6,925	6,941	6,949	6,962	6,971	6,980	6,992	7,019	7,029	7,034	7,058	7,066	7,075
Finance	3,231	3,301	3,317	3,330	3,334	3,343	3,351	3,355	3,366	3,381	3,389	3,394	3,405	3,413	3,424
Depository institutions	2,025	2,024	2,023	2,028	2,029	2,030	2,032	2,034	2,037	2,041	2,043	2,044	2,048	2,048	2,046
Commercial banks	1,466	1,466	1,468	1,472	1,473	1,475	1,478	1,479	1,482	1,486	1,488	1,487	1,490	1,492	1,490
Savings institutions	276	263	259	259	257	256	255	255	254	253	253	254	253	252	251
Nondepository institutions	463	516	525	528	530	532	533	530	534	539	542	543	545	548	553
Security and commodity brokers	525	551	558	562	564	568	572	576	579	583	586	586	592	595	599
Holding and other investment offices	217	210	211	212	211	213	214	215	216	218	218	221	220	222	226
Insurance	2,225	2,217	2,220	2,219	2,220	2,221	2,218	2,219	2,217	2,221	2,222	2,226	2,230	2,232	2,229
Insurance carriers	1,529	1,510	1,510	1,508	1,507	1,507	1,505	1,503	1,500	1,502	1,503	1,506	1,509	1,510	1,507
Insurance agents, brokers, and service	696	707	710	711	713	714	713	716	717	719	719	720	721	722	722
Real estate	1,351	1,381	1,388	1,392	1,395	1,398	1,402	1,406	1,409	1,417	1,418	1,414	1,423	1,421	1,422
Services[1]	33,117	34,377	34,621	34,717	34,800	34,884	34,990	35,091	35,176	35,334	35,451	35,522	35,684	35,699	35,797
Agricultural services	582	625	630	635	639	638	647	649	648	664	669	668	673	675	679
Hotels and other lodging places	1,668	1,716	1,722	1,726	1,731	1,738	1,743	1,746	1,746	1,756	1,752	1,744	1,747	1,748	1,749
Personal services	1,163	1,184	1,189	1,193	1,194	1,194	1,195	1,197	1,196	1,193	1,189	1,182	1,182	1,183	1,187
Business services	6,812	7,254	7,354	7,379	7,398	7,437	7,476	7,521	7,577	7,594	7,618	7,645	7,682	7,660	7,706
Services to buildings	882	897	898	899	896	895	893	897	896	902	903	903	901	895	904
Personnel supply services	2,476	2,646	2,706	2,711	2,706	2,721	2,743	2,758	2,787	2,752	2,744	2,748	2,767	2,734	2,740
Help supply services	2,189	2,341	2,398	2,398	2,391	2,406	2,427	2,432	2,457	2,419	2,409	2,407	2,425	2,397	2,407
Computer and data processing services	1,090	1,208	1,226	1,236	1,246	1,256	1,268	1,278	1,291	1,306	1,322	1,337	1,347	1,357	1,369
Auto repair services and parking	1,020	1,084	1,097	1,104	1,107	1,112	1,117	1,123	1,126	1,132	1,136	1,131	1,137	1,136	1,143
Miscellaneous repair services	359	375	377	376	380	380	380	379	380	382	384	386	387	388	388
Motion pictures	488	522	530	529	528	530	530	532	529	528	532	537	539	546	549
Amusement and recreation services	1,417	1,466	1,471	1,478	1,481	1,483	1,490	1,495	1,494	1,503	1,542	1,561	1,576	1,567	1,558
Health services	9,230	9,469	9,514	9,532	9,552	9,567	9,586	9,600	9,612	9,644	9,673	9,673	9,697	9,712	9,731
Offices and clinics of medical doctors	1,609	1,679	1,691	1,695	1,700	1,703	1,713	1,720	1,721	1,728	1,740	1,740	1,745	1,744	1,750
Nursing and personal care facilities	1,691	1,732	1,739	1,742	1,745	1,747	1,750	1,751	1,753	1,760	1,764	1,761	1,762	1,765	1,764
Hospitals	3,772	3,814	3,823	3,829	3,834	3,839	3,841	3,846	3,852	3,857	3,864	3,869	3,877	3,884	3,893
Home health care services	629	665	668	670	674	673	677	676	678	684	682	682	685	685	685
Legal services	921	930	933	936	939	940	942	943	946	951	952	953	957	958	965
Educational services	1,965	2,020	2,022	2,035	2,041	2,040	2,042	2,046	2,047	2,062	2,062	2,074	2,089	2,092	2,100
Social services	2,336	2,403	2,421	2,422	2,425	2,426	2,432	2,438	2,445	2,458	2,466	2,474	2,494	2,499	2,498
Child day care services	563	569	573	576	576	575	578	579	580	581	587	590	594	600	586
Residential care	643	672	678	679	681	683	684	686	690	694	695	698	702	703	709
Museums and botanical and zoological gardens	80	85	85	86	86	87	87	87	87	87	88	88	88	88	88
Membership organizations	2,146	2,185	2,188	2,189	2,190	2,191	2,192	2,192	2,193	2,199	2,201	2,202	2,209	2,206	2,201
Engineering and management services	2,731	2,846	2,872	2,882	2,894	2,906	2,916	2,927	2,934	2,965	2,971	2,988	3,010	3,025	3,039
Engineering and architectural services	815	839	845	848	852	854	857	862	866	869	869	877	878	880	884
Management and public relations	805	873	886	892	904	911	913	919	923	936	941	950	959	969	968
Government	19,305	19,447	19,513	19,489	19,494	19,514	19,529	19,547	19,545	19,579	19,565	19,639	19,719	19,795	19,717
Federal	2,822	2,757	2,740	2,732	2,732	2,728	2,723	2,716	2,709	2,708	2,703	2,694	2,689	2,691	2,682
Federal, except Postal Service	1,978	1,901	1,884	1,879	1,874	1,870	1,862	1,861	1,856	1,856	1,851	1,843	1,839	1,831	1,826
State	4,635	4,624	4,640	4,618	4,620	4,621	4,621	4,624	4,622	4,635	4,636	4,640	4,671	4,667	4,663
Education	1,919	1,924	1,941	1,922	1,925	1,927	1,928	1,931	1,929	1,938	1,943	1,950	1,972	1,965	1,968
Other State government	2,715	2,700	2,699	2,696	2,695	2,694	2,693	2,693	2,693	2,697	2,693	2,690	2,699	2,702	2,695
Local	11,849	12,066	12,133	12,139	12,142	12,165	12,185	12,207	12,214	12,236	12,226	12,305	12,359	12,437	12,372
Education	6,606	6,748	6,796	6,797	6,807	6,815	6,831	6,849	6,853	6,858	6,850	6,902	6,954	7,017	6,970
Other local government	5,243	5,318	5,337	5,342	5,335	5,350	5,354	5,358	5,361	5,378	5,376	5,403	5,405	5,420	5,402

[1] Includes other industries not shown separately.

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

13. Average weekly hours of production or nonsupervisory workers on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[P]	Sept.[P]
PRIVATE SECTOR	34.5	34.4	34.7	34.4	34.5	34.7	34.4	34.8	34.8	34.5	34.5	34.6	34.4	34.6	34.5
GOODS-PRODUCING	41.0	41.1	41.1	41.1	41.1	41.3	41.1	41.2	41.4	41.4	41.4	41.1	41.2	41.1	41.2
MINING	44.7	45.3	45.3	45.4	45.3	45.7	44.7	45.8	45.9	45.3	46.0	45.4	45.4	45.6	44.7
MANUFACTURING	41.6	41.6	41.7	41.7	41.7	42.0	41.8	41.9	42.1	42.1	42.0	41.8	41.8	41.9	41.9
Overtime hours	4.4	4.5	4.5	4.5	4.6	4.7	4.7	4.7	4.9	4.9	4.8	4.6	4.7	4.7	4.7
Durable goods	42.4	42.4	42.5	42.4	42.5	42.7	42.5	42.7	42.9	43.0	42.8	42.6	42.6	42.7	42.6
Overtime hours	4.7	4.8	4.8	4.7	4.8	4.9	5.0	5.0	5.2	5.3	5.2	5.0	5.0	5.0	5.0
Lumber and wood products	40.6	40.8	40.9	40.8	40.9	41.0	40.7	40.8	41.0	41.2	41.0	41.0	41.1	40.7	40.7
Furniture and fixtures	39.6	39.4	39.6	39.6	39.8	40.1	39.8	39.9	40.3	40.1	40.4	39.9	40.0	40.0	40.2
Stone, clay, and glass products	43.0	43.3	43.2	43.3	43.2	43.4	42.6	43.3	43.1	43.0	43.4	42.9	43.1	43.0	43.0
Primary metal industries	44.0	44.2	44.4	44.4	44.3	44.6	44.4	44.6	44.8	45.1	44.8	44.7	44.4	45.1	45.1
Blast furnaces and basic steel products	44.4	44.5	44.3	44.6	44.6	44.6	44.7	44.6	44.8	45.2	44.7	44.5	44.3	45.4	45.2
Fabricated metal products	42.4	42.4	42.4	42.3	42.3	42.4	42.4	42.5	42.6	42.9	42.6	42.4	42.4	42.4	42.3
Industrial machinery and equipment	43.4	43.1	43.1	43.0	43.1	43.3	43.2	43.4	43.5	43.9	43.6	43.3	43.4	43.4	43.6
Electronic and other electrical equipment	41.6	41.5	41.6	41.5	41.5	41.8	41.3	41.9	42.1	42.3	42.0	42.0	42.0	41.7	41.8
Transportation equipment	43.8	44.0	44.4	44.0	44.3	44.6	44.7	44.6	45.0	44.8	44.5	44.2	43.7	44.2	43.7
Motor vehicles and equipment	44.9	44.9	45.3	44.8	44.9	45.2	45.6	45.3	45.7	45.3	45.2	44.8	44.0	44.8	44.0
Instruments and related products	41.4	41.7	41.8	41.8	41.9	42.0	41.6	42.1	42.0	41.9	41.9	41.8	41.7	42.3	42.0
Miscellaneous manufacturing	39.9	39.7	39.9	39.8	39.9	40.4	39.9	40.5	40.2	40.5	40.3	40.1	40.4	40.2	40.3
Nondurable goods	40.5	40.5	40.7	40.6	40.7	40.9	40.7	40.8	40.9	40.9	40.8	40.6	40.6	40.7	40.8
Overtime hours	4.0	4.1	4.1	4.1	4.2	4.3	4.2	4.3	4.4	4.4	4.3	4.1	4.3	4.2	4.3
Food and kindred products	41.1	41.0	41.0	41.1	41.1	41.3	41.2	41.3	41.3	41.1	41.4	40.9	41.1	41.1	41.1
Textile mill products	40.8	40.6	40.9	40.9	41.2	41.5	41.2	40.9	41.2	41.7	41.4	41.2	41.3	41.2	41.4
Apparel and other textile products	37.0	37.0	37.3	37.3	37.3	37.4	37.2	37.2	37.5	37.5	37.1	37.4	36.9	37.3	37.5
Paper and allied products	43.1	43.3	43.5	43.4	43.6	43.7	43.7	43.7	43.8	43.9	43.8	43.4	43.5	43.4	43.6
Printing and publishing	38.2	38.2	38.3	38.2	38.2	38.4	38.3	38.5	38.6	38.5	38.3	38.3	38.4	38.3	38.8
Chemicals and allied products	43.2	43.2	43.1	43.1	43.3	43.5	43.2	43.3	43.3	43.1	43.3	43.1	43.0	43.4	43.5
Rubber and miscellaneous plastics products	41.5	41.5	41.6	41.5	41.3	41.8	41.4	41.7	41.8	42.0	41.6	41.5	41.7	41.7	41.4
Leather and leather products	38.0	38.1	38.7	38.6	38.9	38.8	38.4	38.9	38.7	38.5	38.2	38.1	38.4	37.8	38.3
SERVICE-PRODUCING	32.7	32.7	32.9	32.6	32.7	33.0	32.7	33.0	33.0	32.7	32.7	32.9	32.7	32.9	32.7
TRANSPORTATION AND PUBLIC UTILITIES	39.4	39.6	39.8	39.6	39.8	39.9	39.5	39.7	39.8	39.3	39.5	39.6	39.0	40.1	39.5
WHOLESALE TRADE	38.3	38.3	38.4	38.2	38.3	38.5	38.2	38.6	38.6	38.4	38.4	38.5	38.3	38.4	38.4
RETAIL TRADE	28.8	28.8	28.9	28.8	28.9	29.0	28.8	29.1	29.1	28.9	28.9	28.9	28.8	29.1	28.7

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

14. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry, seasonally adjusted

Industry	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[P]	Sept.[P]
PRIVATE SECTOR (in current dollars)	$ 11.43	$ 11.81	$11.91	$11.91	$11.98	$12.03	$12.05	$12.10	$12.14	$12.14	$12.19	$12.23	$12.24	$12.30	$12.34
Goods-producing	13.04	13.47	13.57	13.57	13.62	13.69	13.73	13.76	13.79	13.80	13.85	13.86	13.86	13.94	13.99
Mining	15.30	15.61	15.70	15.67	15.77	15.88	15.98	15.96	15.94	15.96	16.05	16.12	16.10	16.09	16.25
Construction	15.09	15.46	15.59	15.58	15.58	15.69	15.73	15.79	15.80	15.86	15.91	15.95	15.96	16.03	16.11
Manufacturing	12.37	12.78	12.87	12.87	12.93	12.99	13.02	13.03	13.07	13.07	13.11	13.12	13.11	13.20	13.23
Excluding overtime	11.74	12.12	12.20	12.21	12.26	12.29	12.34	12.35	12.37	12.38	12.38	12.42	12.41	12.50	12.51
Service-producing	10.88	11.25	11.35	11.35	11.43	11.47	11.49	11.54	11.59	11.58	11.63	11.69	11.70	11.76	11.79
Transportation and public utilities	14.13	14.44	14.51	14.43	14.53	14.56	14.74	14.64	14.73	14.76	14.80	14.85	14.95	14.96	14.93
Wholesale trade	12.43	12.87	13.03	12.93	13.08	13.17	13.12	13.23	13.30	13.27	13.33	13.42	13.38	13.53	13.50
Retail trade	7.69	7.99	8.04	8.10	8.13	8.16	8.19	8.21	8.25	8.26	8.28	8.30	8.32	8.36	8.41
Finance, insurance, and real estate	12.32	12.79	12.91	12.86	12.98	13.00	12.95	13.08	13.12	13.00	13.18	13.29	13.30	13.46	13.46
Services	11.39	11.79	11.89	11.91	11.99	12.04	12.05	12.12	12.16	12.16	12.20	12.26	12.26	12.32	12.35
PRIVATE SECTOR (in constant (1982) dollars)	7.39	7.43	7.45	7.42	7.44	7.45	7.46	7.47	7.49	7.49	7.52	7.54	7.53	7.56	–

– Data not available.

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

15. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

Industry	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[p]	Sept.[p]
PRIVATE SECTOR	$ 11.43	$ 11.81	$11.95	$11.95	$12.00	$12.06	$12.11	$12.14	$12.17	$12.17	$12.17	$12.17	$12.15	$12.20	$12.39
MINING	15.30	15.61	15.73	15.54	15.67	15.95	16.18	16.06	15.98	16.05	15.98	16.11	16.03	15.96	16.28
CONSTRUCTION	15.09	15.46	15.75	15.75	15.62	15.66	15.73	15.69	15.67	15.75	15.83	15.88	16.00	16.09	16.28
MANUFACTURING	12.37	12.78	12.90	12.83	12.93	13.07	13.04	13.02	13.08	13.09	13.09	13.10	13.11	13.15	13.25
Durable goods	12.94	13.34	13.52	13.42	13.49	13.64	13.62	13.58	13.64	13.64	13.64	13.66	13.62	13.71	13.82
Lumber and wood products	10.12	10.44	10.57	10.56	10.57	10.61	10.58	10.60	10.60	10.64	10.71	10.77	10.82	10.80	10.86
Furniture and fixtures	9.82	10.15	10.27	10.28	10.28	10.43	10.38	10.34	10.43	10.42	10.47	10.51	10.53	10.60	10.69
Stone, clay, and glass products	12.41	12.82	12.99	12.91	12.96	12.93	12.99	13.05	13.03	13.06	13.12	13.13	13.20	13.19	13.28
Primary metal industries	14.62	14.97	15.18	15.09	15.18	15.15	15.12	15.09	15.16	15.15	15.09	15.16	15.28	15.20	15.33
Blast furnaces and basic steel products	17.33	17.79	18.10	17.94	18.05	17.92	17.71	17.73	17.86	17.88	17.84	17.99	18.09	17.98	18.31
Fabricated metal products	12.13	12.52	12.67	12.55	12.62	12.79	12.75	12.75	12.78	12.80	12.78	12.77	12.69	12.81	12.86
Industrial machinery and equipment	13.24	13.59	13.77	13.70	13.80	13.97	13.91	13.88	13.93	13.94	13.92	13.95	14.01	14.01	14.17
Electronic and other electrical equipment	11.69	12.18	12.35	12.33	12.36	12.54	12.46	12.42	12.49	12.55	12.56	12.59	12.69	12.76	12.89
Transportation equipment	16.74	17.20	17.45	17.25	17.35	17.57	17.46	17.40	17.51	17.48	17.47	17.45	17.23	17.48	17.63
Motor vehicles and equipment	17.34	17.75	18.04	17.73	17.85	18.12	18.02	17.88	18.01	18.01	17.97	17.92	17.54	17.88	18.09
Instruments and related products	12.71	13.14	13.31	13.27	13.34	13.39	13.38	13.39	13.47	13.47	13.52	13.55	13.54	13.53	13.69
Miscellaneous manufacturing	10.05	10.38	10.48	10.52	10.59	10.59	10.59	10.56	10.56	10.53	10.52	10.50	10.52	10.57	10.61
Nondurable goods	11.58	11.97	12.01	12.00	12.12	12.24	12.20	12.19	12.25	12.27	12.27	12.27	12.37	12.33	12.41
Food and kindred products	10.93	11.20	11.19	11.16	11.38	11.46	11.41	11.32	11.40	11.45	11.48	11.45	11.52	11.51	11.52
Tobacco products	19.41	19.34	18.37	17.73	18.60	18.67	18.56	18.52	19.40	20.32	20.76	21.10	20.95	19.77	18.23
Textile mill products	9.41	9.69	9.78	9.73	9.77	9.92	9.93	9.89	9.92	9.94	9.94	9.97	10.01	10.02	10.09
Apparel and other textile products	7.64	7.96	8.00	8.03	8.01	8.15	8.12	8.19	8.24	8.21	8.23	8.25	8.20	8.24	8.37
Paper and allied products	14.23	14.67	14.74	14.74	14.86	14.95	14.84	14.78	14.93	15.00	14.98	14.99	15.18	15.14	15.18
Printing and publishing	12.33	12.65	12.82	12.81	12.83	12.90	12.86	12.90	13.01	12.99	12.93	12.90	13.01	13.06	13.21
Chemicals and allied products	15.62	16.17	16.25	16.28	16.38	16.45	16.37	16.49	16.42	16.42	16.47	16.54	16.59	16.56	16.58
Petroleum and coal products	19.36	19.32	19.35	19.35	19.61	20.26	20.13	20.42	20.51	19.97	19.98	19.94	20.02	19.95	20.52
Rubber and miscellaneous plastics products	10.91	11.24	11.31	11.28	11.33	11.51	11.49	11.45	11.50	11.53	11.50	11.53	11.57	11.58	11.66
Leather and leather products	8.17	8.56	8.69	8.71	8.73	8.83	8.83	8.91	8.86	8.87	8.89	8.91	8.75	8.89	9.13
TRANSPORTATION AND PUBLIC UTILITIES	14.13	14.44	14.57	14.49	14.57	14.60	14.71	14.66	14.70	14.77	14.72	14.78	14.95	14.95	14.99
WHOLESALE TRADE	12.43	12.87	13.03	12.94	13.06	13.20	13.18	13.26	13.28	13.33	13.32	13.36	13.37	13.46	13.50
RETAIL TRADE	7.69	7.99	8.06	8.12	8.13	8.16	8.24	8.24	8.27	8.28	8.27	8.27	8.27	8.29	8.43
FINANCE, INSURANCE, AND REAL ESTATE	12.32	12.79	12.89	12.87	12.97	13.02	12.99	13.15	13.20	13.09	13.18	13.23	13.18	13.32	13.44
SERVICES	11.39	11.79	11.89	11.93	12.04	12.16	12.19	12.24	12.24	12.20	12.17	12.15	12.07	12.11	12.36

[p] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

16. Average weekly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

Industry	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[P]	Sept.[P]
PRIVATE SECTOR															
Current dollars	$ 394.34	$ 406.26	$417.06	$412.28	$414.00	$420.89	$410.53	$418.83	$421.08	$418.65	$419.87	$424.73	$421.61	$427.00	$429.93
Seasonally adjusted	–	–	413.28	409.70	413.31	417.44	414.52	421.08	422.47	418.83	420.56	423.16	421.06	425.58	425.73
Constant (1982) dollars	255.07	255.51	260.50	256.87	257.30	261.58	254.51	258.86	259.93	258.11	258.86	261.53	259.45	262.29	263.12
MINING	683.91	707.13	722.01	713.29	712.99	733.70	715.16	732.34	730.29	723.86	731.88	737.84	724.56	729.37	737.48
CONSTRUCTION	587.00	602.94	625.28	628.43	606.06	604.48	572.57	588.38	601.73	609.53	628.45	627.26	641.60	638.77	651.20
MANUFACTURING															
Current dollars	514.59	531.65	545.67	537.58	544.35	559.40	541.16	541.63	549.36	547.16	548.47	550.20	540.13	552.30	561.80
Constant (1982) dollars	332.85	334.37	340.83	334.94	338.32	347.67	335.50	334.75	339.11	337.34	338.14	338.79	332.39	339.25	343.82
Durable goods	548.66	565.62	582.71	573.03	578.72	594.70	576.13	577.15	585.16	582.43	583.79	584.65	570.68	585.42	595.64
Lumber and wood products	410.87	425.95	439.71	437.18	433.37	437.13	418.97	426.12	431.42	438.37	442.32	446.96	441.46	444.96	449.60
Furniture and fixtures	388.87	399.91	414.91	414.28	416.34	433.89	407.93	403.26	416.16	411.59	416.71	419.35	415.94	429.30	438.29
Stone, clay, and glass products	533.63	555.11	575.46	568.04	563.76	557.28	531.29	548.10	553.78	560.27	573.34	572.47	571.56	577.72	585.65
Primary metal industries	643.28	661.67	680.06	670.00	675.51	686.30	672.84	673.01	679.17	677.21	674.52	679.17	670.79	680.96	697.52
Blast furnaces and basic steel products	769.45	791.66	807.26	796.54	814.06	808.19	791.64	787.21	798.34	802.81	797.45	802.35	801.39	809.10	831.27
Fabricated metal products	514.31	530.85	546.08	535.89	542.66	557.64	536.78	539.33	543.15	542.72	543.15	544.00	527.90	545.71	552.98
Industrial machinery and equipment	574.62	585.73	596.24	587.73	597.54	620.27	602.30	603.78	610.13	607.78	605.52	605.43	599.63	603.83	620.65
Electronic and other electrical equipment	486.30	505.47	518.70	514.16	520.36	537.97	513.35	519.16	527.08	524.59	523.75	528.78	522.83	532.09	545.25
Transportation equipment	733.21	756.80	787.00	762.45	772.08	801.19	778.72	770.82	787.95	781.36	780.91	778.27	730.55	772.62	782.77
Motor vehicles and equipment	778.57	769.98	833.45	797.85	806.82	842.58	819.91	804.60	824.86	817.65	817.64	811.78	740.19	801.02	812.24
Instruments and related products	526.19	547.94	559.02	553.36	562.95	575.77	557.95	562.38	568.43	561.70	563.78	567.75	557.85	569.61	576.35
Miscellaneous manufacturing	401.00	412.09	423.39	420.89	427.11	435.25	419.36	423.46	425.57	423.31	420.80	421.05	415.54	425.97	432.89
Nondurable goods	468.99	484.79	496.01	490.80	499.34	509.18	494.10	492.48	498.58	496.94	498.16	499.39	499.75	505.53	513.77
Food and kindred products	449.22	459.20	472.22	465.37	475.68	481.32	464.39	460.72	463.98	462.58	471.83	467.16	473.47	481.12	487.30
Tobacco products	768.64	773.60	771.54	730.48	766.32	782.27	727.55	724.13	758.54	780.29	803.41	827.12	739.54	721.61	685.45
Textile mill products	383.93	393.41	404.89	399.90	407.41	416.64	407.13	398.57	408.70	410.52	409.53	415.75	406.41	416.83	422.77
Apparel and other textile products	282.68	294.52	300.80	301.93	301.98	308.89	299.63	302.21	309.00	305.41	306.16	311.85	300.12	309.82	316.39
Paper and allied products	613.31	635.21	648.56	642.66	655.33	665.28	649.99	639.97	649.46	651.00	650.13	650.57	657.29	657.08	669.44
Printing and publishing	471.01	483.23	497.42	491.90	496.52	503.10	486.11	491.49	503.49	497.52	492.63	490.20	495.68	504.12	519.15
Chemicals and allied products	674.78	698.54	703.63	703.30	715.81	730.38	705.55	710.72	709.34	706.06	709.86	712.87	708.39	713.74	724.55
Petroleum and coal products	846.03	842.35	855.27	843.66	862.84	889.41	905.85	886.23	881.93	846.73	847.15	855.43	854.85	855.86	896.72
Rubber and miscellaneous plastics products	452.77	466.46	476.15	469.25	471.33	490.33	475.69	475.18	480.70	480.80	479.55	480.80	474.37	482.89	488.55
Leather and leather products	310.46	326.14	340.65	339.69	343.09	347.02	332.89	336.80	341.11	337.95	339.60	345.71	330.75	339.60	354.24
TRANSPORTATION AND PUBLIC UTILITIES	556.72	571.82	587.17	575.25	579.89	582.54	570.75	579.07	580.65	578.98	578.50	588.24	589.03	605.48	599.60
WHOLESALE TRADE	476.07	492.92	502.96	495.60	500.20	510.84	499.52	510.51	511.28	510.54	512.82	517.03	512.07	518.21	519.75
RETAIL TRADE	221.47	230.11	234.55	233.04	232.52	239.09	230.72	236.49	237.35	236.81	238.18	243.14	244.50	246.21	243.63
FINANCE, INSURANCE, AND REAL ESTATE	442.29	459.16	470.49	459.46	464.33	477.83	463.74	482.61	481.80	469.93	473.16	484.22	471.84	479.52	481.15
SERVICES	369.04	382.00	387.61	386.53	390.10	397.63	390.08	400.25	399.02	395.28	394.31	398.52	395.90	398.42	401.70

– Data not available.

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

17. Diffusion indexes of employment change, seasonally adjusted

[In percent]

Timespan and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov	Dec.
	Private nonfarm payrolls, 356 industries											
Over 1-month span:												
1994	57.6	61.9	67.1	64.5	57.7	63.9	62.5	62.6	61.4	60.3	63.8	62.4
1995	62.4	60.1	54.5	55.6	48.0	53.9	54.1	59.8	57.0	54.9	57.2	57.9
1996	51.7	64.3	60.1	54.9	62.9	60.5	56.5	59.3	54.4	62.6	58.1	61.0
1997	59.3	59.1	59.0	61.1	57.4	50.7	58.8	57.4	54.8	–	–	–
Over 3-month span:												
1994	65.3	69.5	70.4	68.7	67.1	67.0	69.1	69.7	65.7	65.6	67.0	66.2
1995	65.4	62.5	58.7	53.2	54.6	52.4	57.9	59.6	59.7	59.0	57.0	56.3
1996	62.6	63.6	62.6	61.2	62.1	63.1	62.6	58.8	62.8	60.4	64.7	65.0
1997	64.6	62.2	64.2	65.6	59.7	58.7	59.3	61.9	–	–	–	–
Over 6-month span:												
1994	71.1	69.8	69.8	70.9	70.1	69.8	69.7	69.4	69.4	67.4	67.7	66.2
1995	66.9	61.4	58.1	56.6	58.1	58.1	56.7	59.8	60.3	59.1	61.5	63.3
1996	62.2	63.5	63.5	63.5	62.6	61.2	65.3	63.6	62.6	64.5	64.2	67.4
1997	67.6	66.6	64.5	64.6	63.9	64.3	–	–	–	–	–	–
Over 12-month span:												
1994	70.2	71.6	71.8	71.8	72.1	71.8	71.5	72.1	70.1	69.5	66.6	65.0
1995	63.6	62.4	62.6	63.3	61.7	61.9	58.7	62.2	62.2	61.1	62.2	63.3
1996	63.5	64.7	62.4	62.9	64.7	64.2	65.0	63.1	63.8	66.7	65.7	65.0
1997	67.3	65.9	69.7	–	–	–	–	–	–	–	–	–
	Manufacturing payrolls, 139 industries											
Over 1-month span:												
1994	55.8	59.0	60.4	58.6	52.9	58.6	59.4	56.1	52.9	55.0	58.6	58.3
1995	54.3	56.1	44.2	51.4	42.1	42.8	43.5	52.2	47.1	50.0	47.5	50.7
1996	45.7	54.3	47.8	39.2	52.2	52.2	44.2	52.9	44.2	50.7	49.6	52.2
1997	54.0	50.4	52.9	52.9	51.4	49.3	51.8	50.4	52.2	–	–	–
Over 3-month span:												
1994	61.9	64.7	65.5	59.7	57.6	60.1	62.2	57.9	55.0	55.4	60.1	59.4
1995	59.7	50.4	47.5	40.3	42.4	36.3	38.5	43.9	49.3	46.4	45.3	43.9
1996	47.5	47.8	42.1	38.5	43.2	45.0	48.9	43.2	50.4	46.4	52.5	52.5
1997	53.2	51.4	50.7	52.5	48.6	48.9	49.6	52.2	–	–	–	–
Over 6-month span:												
1994	62.2	62.2	62.6	63.3	59.4	56.5	56.5	58.6	58.6	55.0	58.3	55.0
1995	55.8	48.6	43.9	38.8	39.2	39.6	38.8	39.6	43.9	45.0	44.2	44.6
1996	41.4	41.7	41.0	38.1	39.6	40.6	47.5	46.8	45.3	50.4	48.2	53.2
1997	53.2	53.2	50.4	49.3	49.3	51.8	–	–	–	–	–	–
Over 12-month span:												
1994	57.9	58.6	60.8	60.8	60.8	63.3	59.4	60.1	57.2	56.5	50.4	49.6
1995	46.0	44.2	46.0	47.8	41.0	41.7	38.5	38.8	36.3	37.4	38.1	39.9
1996	39.6	42.8	39.2	39.6	42.4	40.3	43.5	40.3	43.5	46.8	46.4	47.1
1997	51.4	47.8	52.2	–	–	–	–	–	–	–	–	–

– Data not available.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment. Data for the 2 most recent months shown in each span are preliminary. See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

18. Annual data: Employment status of the population

[Numbers in thousands]

Employment status	1988	1989	1990	1991	1992	1993	1994	1995	1996
Civilian noninstitutional population	184,613	186,393	189,164	190,925	192,805	194,838	196,814	198,584	200,591
Civilian labor force	121,669	123,869	125,840	126,346	128,105	129,200	131,056	132,304	133,943
Labor force participation rate	65.9	66.5	66.5	66.2	66.4	66.3	66.6	66.6	66.8
Employed	114,968	117,342	118,793	117,718	118,492	120,259	123,060	124,900	126,708
Employment-population ratio	62.3	63.0	62.8	61.7	61.5	61.7	62.5	62.9	63.2
Agriculture	3,169	3,199	3,223	3,269	3,247	3,115	3,409	3,440	3,443
Nonagricultural industries	111,800	114,142	115,570	114,499	115,245	117,144	119,651	121,460	123,264
Unemployed	6,701	6,528	7,047	8,628	9,613	8,940	7,996	7,404	7,236
Unemployment rate	5.5	5.3	5.6	6.8	7.5	6.9	6.1	5.6	5.4
Not in the labor force	62,944	62,523	63,324	64,578	64,700	65,638	65,758	66,280	66,647

19. Annual data: Employment levels by industry

[In thousands]

Industry	1988	1989	1990	1991	1992	1993	1994	1995	1996
Total employment	105,210	107,895	109,419	108,256	108,604	110,730	114,172	117,191	119,523
Private sector	87,824	90,117	91,115	89,854	89,959	91,889	95,044	97,885	100,076
Goods-producing	25,125	25,254	24,905	23,745	23,231	23,352	23,908	24,265	24,431
Mining	713	692	709	689	635	610	601	581	574
Construction	5,098	5,171	5,120	4,650	4,492	4,668	4,986	5,160	5,400
Manufacturing	19,314	19,391	19,076	18,406	18,104	18,075	18,321	18,524	18,457
Service-producing	80,086	82,642	84,514	84,511	85,373	87,378	90,264	92,925	95,092
Transportation and public utilities	5,514	5,625	5,793	5,762	5,721	5,829	5,993	6,132	6,261
Wholesale trade	6,030	6,187	6,173	6,081	5,997	5,981	6,162	6,378	6,483
Retail trade	19,023	19,475	19,601	19,284	19,356	19,773	20,507	21,187	21,625
Finance, insurance, and real estate	6,630	6,668	6,709	6,646	6,602	6,757	6,896	6,806	6,899
Services	25,504	26,907	27,934	28,336	29,052	30,197	31,579	33,117	34,377
Government	17,386	17,779	18,304	18,402	18,645	18,841	19,128	19,305	19,447
Federal	2,971	2,988	3,085	2,966	2,969	2,915	2,870	2,822	2,757
State	4,076	4,182	4,305	4,355	4,408	4,488	4,576	4,635	4,624
Local	10,339	10,609	10,914	11,081	11,267	11,438	11,682	11,849	12,066

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

20. Annual data: Average hours and earnings of production or nonsupervisory workers on nonfarm payrolls, by industry

Industry	1988	1989	1990	1991	1992	1993	1994	1995	1996
Private sector:									
Average weekly hours	34.7	34.6	34.5	34.3	34.4	34.5	34.7	34.5	34.4
Average hourly earnings (in dollars)	9.28	9.66	10.01	10.32	10.57	10.83	11.12	11.43	11.81
Average weekly earnings (in dollars)	322.02	334.24	345.35	353.98	363.61	373.64	385.86	394.34	406.26
Mining:									
Average weekly hours	42.3	43.0	44.1	44.4	43.9	44.3	44.8	44.7	45.3
Average hourly earnings (in dollars)	12.80	13.26	13.68	14.19	14.54	14.60	14.88	15.30	15.61
Average weekly earnings (in dollars)	541.44	570.18	603.29	630.04	638.31	646.78	666.62	683.91	707.13
Construction:									
Average weekly hours	37.9	37.9	38.2	38.1	38.0	38.5	38.9	38.9	39.0
Average hourly earnings (in dollars)	13.08	13.54	13.77	14.00	14.15	14.38	14.73	15.09	15.46
Average weekly earnings (in dollars)	495.73	513.17	526.01	533.40	537.70	553.63	573.00	587.00	602.94
Manufacturing:									
Average weekly hours	41.1	41.0	40.8	40.7	41.0	41.4	42.0	41.6	41.6
Average hourly earnings (in dollars)	10.19	10.48	10.83	11.18	11.46	11.74	12.07	12.37	12.78
Average weekly earnings (in dollars)	418.81	429.68	441.86	455.03	469.86	486.04	506.94	514.59	531.65
Transportation and public utilities:									
Average weekly hours	38.8	38.9	38.9	38.7	38.9	39.6	39.9	39.4	39.6
Average hourly earnings (in dollars)	12.26	12.60	12.97	13.22	13.45	13.62	13.86	14.13	14.44
Average weekly earnings (in dollars)	475.69	490.14	504.53	511.61	523.21	539.35	553.01	556.72	571.82
Wholesale trade:									
Average weekly hours	38.1	38.0	38.1	38.1	38.2	38.2	38.4	38.3	38.3
Average hourly earnings (in dollars)	9.98	10.39	10.79	11.15	11.39	11.74	12.06	12.43	12.87
Average weekly earnings (in dollars)	380.24	394.82	411.10	424.82	435.10	448.47	463.10	476.07	492.92
Retail trade:									
Average weekly hours	29.1	28.9	28.8	28.6	28.8	28.8	28.9	28.8	28.8
Average hourly earnings (in dollars)	6.31	6.53	6.75	6.94	7.12	7.29	7.49	7.69	7.99
Average weekly earnings (in dollars)	183.62	188.72	194.40	198.48	205.06	209.95	216.46	221.47	230.11
Finance, insurance, and real estate:									
Average weekly hours	35.9	35.8	35.8	35.7	35.8	35.8	35.8	35.9	35.9
Average hourly earnings (in dollars)	9.06	9.53	9.97	10.39	10.82	11.35	11.83	12.32	12.79
Average weekly earnings (in dollars)	325.25	341.17	356.93	370.92	387.36	406.33	423.51	442.29	459.16
Services:									
Average weekly hours	32.6	32.6	32.5	32.4	32.5	32.5	32.5	32.4	32.4
Average hourly earnings (in dollars)	8.88	9.38	9.83	10.23	10.54	10.78	11.04	11.39	11.79
Average weekly earnings (in dollars)	289.49	305.79	319.48	331.45	342.55	350.35	358.80	369.04	382.00

21. Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	1995			1996				1997		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended June 1997	12 months ended June 1997
Civilian workers[2]	125.6	126.6	127.2	128.3	129.2	130.2	130.9	132.0	132.8	0.6	2.8
Workers, by occupational group:											
White-collar workers	126.3	127.4	128.0	129.1	130.0	131.3	131.9	133.1	133.9	.6	3.0
Professional specialty and technical	127.5	128.9	129.4	130.6	131.4	132.6	133.1	133.7	134.6	.7	2.4
Executive, administrative, and managerial	125.7	126.7	127.4	128.5	129.1	131.1	131.5	133.2	134.0	.6	3.8
Administrative support, including clerical	127.3	128.1	129.0	130.1	130.8	132.0	132.6	133.6	134.6	.7	2.9
Blue-collar workers	124.5	125.2	125.8	126.7	127.7	128.3	129.1	129.8	130.9	.8	2.5
Service occupations	125.8	126.7	127.4	128.0	128.7	129.7	131.0	132.0	132.7	.5	3.1
Workers, by industry division:											
Goods-producing	126.0	126.5	127.4	128.3	129.3	130.1	130.9	131.5	132.7	.9	2.6
Manufacturing	126.9	127.3	128.3	129.3	130.4	131.3	132.1	132.6	133.8	.9	2.6
Service-producing	125.5	126.6	127.1	128.2	129.1	130.2	130.9	132.1	132.9	.6	2.9
Services	127.8	128.9	129.4	130.4	131.2	132.5	133.2	134.1	134.9	.6	2.8
Health services	130.2	131.1	132.0	132.5	133.4	134.1	134.4	135.2	135.7	.4	1.7
Hospitals	129.7	130.4	131.4	132.3	132.9	133.6	133.8	134.2	134.6	.3	1.3
Educational services	127.4	129.8	130.2	130.5	130.8	133.2	133.9	134.0	134.2	.1	2.6
Public administration[3]	126.1	127.4	128.3	129.2	129.6	130.7	131.8	133.0	133.0	.0	2.6
Nonmanufacturing	125.2	126.3	126.8	127.9	128.8	129.8	130.5	131.7	132.5	.6	2.9
Private industry workers	125.4	126.2	126.7	127.9	129.0	129.8	130.6	131.7	132.8	.8	2.9
Excluding sales occupations	125.7	126.5	127.1	128.3	129.2	130.2	130.8	131.9	133.0	.8	2.9
Workers, by occupational group:											
White-collar workers	126.2	127.0	127.6	129.0	130.0	131.1	131.7	133.1	134.1	.8	3.2
Excluding sales occupations	127.0	127.8	128.6	129.9	130.7	132.0	132.5	133.7	134.8	.8	3.1
Professional specialty and technical occupations	128.4	129.3	129.9	131.6	132.6	133.3	133.7	134.6	135.9	1.0	2.5
Executive, administrative, and managerial occupations	125.4	126.2	126.9	128.0	128.8	130.9	131.3	133.0	133.9	.7	4.0
Sales occupations	122.4	123.2	123.2	124.8	126.9	126.7	128.1	130.1	130.7	.5	3.0
Administrative support occupations, including clerical	127.3	128.1	129.0	130.1	130.8	132.0	132.5	133.7	134.7	.7	3.0
Blue-collar workers	124.4	125.1	125.6	126.6	127.6	128.1	129.0	129.6	130.8	.9	2.5
Precision production, craft, and repair occupations	124.4	125.4	125.7	126.5	127.7	128.2	129.1	129.6	130.9	1.0	2.5
Machine operators, assemblers, and inspectors	124.8	125.1	126.2	127.1	128.1	128.7	129.5	130.0	131.2	.9	2.4
Transportation and material moving occupations	122.4	122.9	123.0	123.9	124.7	124.9	125.2	126.1	126.8	.6	1.7
Handlers, equipment cleaners, helpers, and laborers	125.3	125.9	126.8	128.5	129.3	130.0	131.3	132.8	133.4	.5	3.2
Service occupations	124.0	124.7	125.2	125.8	126.5	127.4	128.9	129.8	130.9	.8	3.5
Production and nonsupervisory occupations[4]	125.0	125.8	126.3	127.5	128.6	129.2	130.0	131.1	132.1	.8	2.7
Workers, by industry division:											
Goods-producing	125.9	126.5	127.3	128.2	129.3	130.1	130.9	131.4	132.7	1.0	2.6
Excluding sales occupations	125.6	126.1	127.0	128.0	129.0	129.8	130.5	131.1	132.3	.9	2.6
White-collar occupations	127.6	128.1	129.0	130.0	131.0	132.2	132.9	133.5	134.8	1.0	2.9
Excluding sales occupations	126.7	127.2	128.2	129.4	130.2	131.5	132.1	132.6	133.8	.9	2.8
Blue-collar occupations	124.9	125.5	126.3	127.1	128.3	128.9	129.6	130.2	131.4	.9	2.4
Construction	122.0	123.1	123.4	124.3	125.3	125.9	126.4	127.2	128.7	1.2	2.7
Manufacturing	126.9	127.3	128.3	129.3	130.4	131.3	132.1	132.6	133.8	.9	2.6
White-collar occupations	128.0	128.7	129.5	130.5	131.6	132.8	133.6	133.9	135.2	1.0	2.7
Excluding sales occupations	126.6	127.4	128.3	129.5	130.5	131.8	132.5	132.8	133.8	.8	2.5
Blue-collar occupations	126.0	126.3	127.5	128.4	129.5	130.2	131.1	131.7	132.8	.8	2.5
Durables	127.7	128.2	129.0	129.7	131.2	131.9	132.6	133.0	134.1	.8	2.2
Nondurables	125.4	125.7	127.0	128.3	128.9	130.0	131.0	131.7	133.0	1.0	3.2
Service-producing	124.9	125.8	126.2	127.6	128.6	129.5	130.2	131.6	132.5	.7	3.0
Excluding sales occupations	125.8	126.6	127.2	128.4	129.2	130.3	130.9	132.2	133.3	.8	3.2
White-collar occupations	125.6	126.5	127.1	128.5	129.6	130.6	131.1	132.7	133.7	.8	3.2
Excluding sales occupations	127.1	128.0	128.7	130.0	130.9	132.2	132.6	134.0	135.1	.8	3.2
Blue-collar occupations	123.1	123.9	124.0	125.2	126.0	126.4	127.3	128.2	129.2	.8	2.5
Service occupations	123.6	124.2	124.8	125.3	126.1	127.1	128.6	129.5	130.6	.8	3.6
Transportation and public utilities	124.7	126.0	126.6	127.9	128.4	129.3	130.4	131.3	131.7	.3	2.6
Transportation	123.0	124.7	125.1	126.9	127.7	128.2	129.2	130.6	130.9	.2	2.5
Public utilities	126.8	127.5	128.5	128.9	129.1	130.4	131.7	132.0	132.5	.4	2.6
Communications	126.6	127.4	128.3	128.0	127.5	129.1	131.1	130.2	130.5	.2	2.4
Electric, gas, and sanitary services	127.0	127.7	128.7	130.1	131.1	132.0	132.4	134.2	134.9	.5	2.9
Wholesale and retail trade	122.8	123.8	124.2	125.5	126.4	127.5	128.6	130.1	131.2	.8	3.8
Excluding sales occupations	123.1	124.1	125.0	125.9	126.4	128.0	129.0	130.4	131.9	1.2	4.4
Wholesale trade	124.8	126.1	127.0	127.5	129.3	129.9	130.9	132.9	133.8	.7	3.5
Excluding sales occupations	125.1	126.2	127.1	127.4	128.7	130.0	130.9	132.6	133.7	.8	3.9
Retail trade	121.8	122.6	122.7	124.5	124.8	126.2	127.4	128.5	129.7	.9	3.9
Food stores	120.7	121.8	122.4	123.6	124.4	127.0	128.4	128.2	128.2	.0	3.1
General merchandise stores	120.7	121.0	121.7	122.4	123.6	124.6	126.3	126.4	127.7	1.0	3.3

See footnotes at end of table.

21. Continued—Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	1995			1996				1997		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 1997	
Finance, insurance, and real estate	121.8	122.7	123.1	124.5	126.3	126.7	126.0	128.6	129.4	0.6	2.5
Excluding sales occupations	124.6	125.4	125.7	127.5	128.5	129.7	129.2	131.5	132.4	.7	3.0
Banking, savings and loan, and other credit agencies	124.1	124.8	124.4	126.9	128.2	130.3	128.0	130.6	131.6	.8	2.7
Insurance	124.6	124.9	125.9	127.6	128.2	129.3	129.6	131.9	132.1	.2	3.0
Services	128.2	128.9	129.4	130.7	131.7	132.7	133.4	134.6	135.7	.8	3.0
Business services	125.3	125.7	126.3	128.9	129.2	130.2	131.8	133.3	134.2	.7	3.9
Health services	130.3	131.3	132.2	132.6	133.5	134.2	134.5	135.5	135.9	.3	1.8
Hospitals	129.7	130.3	131.3	132.2	132.8	133.4	133.7	134.0	134.4	.3	1.2
Educational services	130.3	133.2	133.7	134.4	134.8	137.5	138.0	138.5	138.8	.2	3.0
Colleges and universities	131.3	134.6	135.2	135.9	136.2	138.6	139.1	139.5	139.9	.3	2.7
Nonmanufacturing	124.6	125.5	125.9	127.2	128.2	129.1	129.8	131.1	132.1	.8	3.0
White-collar workers	125.6	126.5	127.0	128.5	129.5	130.5	131.1	132.7	133.6	.7	3.2
Excluding sales occupations	127.1	128.0	128.6	130.0	130.8	132.1	132.5	134.0	135.1	.8	3.3
Blue-collar occupations	122.5	123.5	123.7	124.6	125.6	125.9	126.7	127.5	128.6	.9	2.4
Service occupations	123.5	124.2	124.7	125.3	126.0	127.0	128.6	129.4	130.5	.9	3.6
State and local government workers	126.9	128.7	129.3	129.9	130.2	131.9	132.7	133.2	133.3	.1	2.4
Workers, by occupational group:											
White-collar workers	126.6	128.6	129.1	129.6	129.9	131.8	132.5	132.9	133.0	.1	2.4
Professional specialty and technical	126.3	128.4	128.8	129.1	129.5	131.6	132.3	132.5	132.5	.0	2.3
Executive, administrative, and managerial	127.4	129.1	129.9	130.7	131.0	132.0	132.9	134.1	134.4	.2	2.6
Administrative support, including clerical	126.9	128.4	129.1	130.0	130.4	131.8	133.0	133.3	133.5	.2	2.4
Blue-collar workers	126.3	127.2	128.0	129.0	129.5	130.3	131.2	132.1	132.3	.2	2.2
Workers, by industry division:											
Services	127.1	129.2	129.6	130.0	130.3	132.4	133.1	133.2	133.3	.1	2.3
Services excluding schools[5]	127.7	128.9	129.4	130.3	130.8	131.9	132.0	132.5	132.9	.3	1.6
Health services	129.8	131.0	131.6	132.5	133.1	134.0	134.1	134.5	134.9	.3	1.4
Hospitals	129.9	131.1	131.7	132.6	133.2	134.2	134.3	134.8	135.2	.3	1.5
Educational services	126.8	129.0	129.4	129.7	130.0	132.3	133.0	133.1	133.2	.1	2.5
Schools	127.1	129.4	129.8	130.0	130.3	132.6	133.4	133.4	133.5	.1	2.5
Elementary and secondary	127.4	129.8	130.1	130.2	130.5	132.6	133.1	133.1	133.3	.2	2.1
Colleges and universities	126.1	128.0	128.7	129.4	129.9	132.5	134.0	134.3	134.1	–.1	3.2
Public administration[3]	126.1	127.4	128.3	129.2	129.6	130.7	131.8	133.0	133.0	.0	2.6

[1] Cost (cents per hour worked) measured in the Employment Cost Index consists of wages, salaries, and employer cost of employee benefits.

[2] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[3] Consists of legislative, judicial, administrative, and regulatory activities.

[4] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[5] Includes, for example, library, social, and health services.

22. Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	1995			1996				1997		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended June 1997	12 months ended June 1997
Civilian workers[1]	122.2	123.2	123.9	125.1	126.1	127.2	128.0	129.2	130.1	0.7	3.2
Workers, by occupational group:											
White-collar workers	123.1	124.3	125.1	126.3	127.3	128.6	129.3	130.6	131.5	.7	3.3
Professional specialty and technical	124.7	126.1	126.9	128.0	128.8	130.2	130.7	131.4	132.3	.7	2.7
Executive, administrative, and managerial	122.8	123.8	124.7	126.2	127.0	129.0	129.4	131.0	132.0	.8	3.9
Administrative support, including clerical	123.4	124.3	125.2	126.4	127.1	128.4	129.1	130.4	131.4	.8	3.4
Blue-collar workers	120.3	121.1	121.7	122.8	123.9	124.5	125.4	126.2	127.5	1.0	2.9
Service occupations	121.8	122.8	123.4	124.2	124.9	126.2	127.6	128.6	129.3	.5	3.5
Workers, by industry division:											
Goods-producing	121.4	122.1	122.9	123.9	125.1	126.1	126.8	127.6	128.9	1.0	3.0
Manufacturing	122.9	123.5	124.3	125.4	126.5	127.7	128.4	129.1	130.3	.9	3.0
Service-producing	122.5	123.7	124.3	125.6	126.5	127.7	128.5	129.8	130.6	.6	3.2
Services	124.8	126.2	126.9	128.0	128.9	130.3	131.1	132.0	132.9	.7	3.1
Health services	126.6	127.5	128.4	129.3	130.0	130.8	131.4	132.4	133.1	.5	2.4
Hospitals	126.0	126.8	127.8	128.6	129.2	130.0	130.5	131.0	131.5	.4	1.8
Educational services	125.1	127.8	128.5	128.8	129.1	131.6	132.3	132.5	132.6	.1	2.7
Public administration[2]	122.3	123.2	124.1	124.9	125.3	126.6	127.7	128.9	129.0	.1	3.0
Nonmanufacturing	121.9	123.1	123.7	125.0	125.9	127.0	127.8	129.1	130.0	.7	3.3
Private industry workers	121.5	122.4	123.1	124.4	125.6	126.5	127.3	128.6	129.7	.9	3.3
Excluding sales occupations	121.8	122.6	123.4	124.7	125.7	126.8	127.5	128.6	129.9	1.0	3.3
Workers, by occupational group:											
White-collar workers	122.7	123.6	124.3	125.8	127.0	128.0	128.7	130.2	131.3	.8	3.4
Excluding sales occupations	123.4	124.3	125.2	126.7	127.6	129.0	129.4	130.8	132.0	.9	3.4
Professional specialty and technical occupations	124.4	125.3	126.1	127.8	128.8	129.6	129.9	131.0	132.4	1.1	2.8
Executive, administrative, and managerial occupations	122.5	123.4	124.4	125.9	126.8	128.9	129.3	131.0	132.1	.8	4.2
Sales occupations	119.3	120.5	120.4	122.0	124.4	123.9	125.9	127.8	128.3	.4	3.1
Administrative support occupations, including clerical	123.5	124.3	125.3	126.5	127.3	128.5	129.2	130.6	131.7	.8	3.5
Blue-collar workers	120.1	120.8	121.4	122.5	123.7	124.3	125.1	126.0	127.3	1.0	2.9
Precision production, craft, and repair occupations	119.9	121.0	121.4	122.4	123.7	124.2	125.1	125.8	127.4	1.3	3.0
Machine operators, assemblers, and inspectors	120.9	121.4	122.3	123.4	124.5	125.4	126.4	127.2	128.5	1.0	3.2
Transportation and material moving occupations	117.8	118.5	118.6	120.0	120.6	121.0	121.1	122.3	123.0	.6	2.0
Handlers, equipment cleaners, helpers, and laborers	121.2	121.5	122.6	124.2	125.1	125.8	127.1	128.4	129.3	.7	3.4
Service occupations	120.0	120.8	121.4	122.2	123.0	124.1	125.7	126.6	127.6	.8	3.7
Production and nonsupervisory occupations[3]	121.0	121.8	122.4	123.7	124.9	125.6	126.5	127.7	128.8	.9	3.1
Workers, by industry division:											
Goods-producing	121.4	122.1	122.9	123.9	125.1	126.1	126.8	127.5	128.9	1.1	3.0
Excluding sales occupations	120.9	121.6	122.4	123.5	124.6	125.7	126.3	127.0	128.3	1.0	3.0
White-collar occupations	123.8	124.4	125.3	126.2	127.3	128.6	129.1	130.0	131.4	1.1	3.2
Excluding sales occupations	122.5	123.2	124.2	125.3	126.3	127.7	128.1	128.9	130.0	.9	2.9
Blue-collar occupations	119.9	120.7	121.4	122.4	123.7	124.5	125.3	126.0	127.3	1.0	2.9
Construction	115.7	116.8	117.4	118.3	119.6	120.4	120.8	122.0	123.6	1.3	3.3
Manufacturing	122.9	123.5	124.3	125.4	126.5	127.7	128.4	129.1	130.3	.9	3.0
White-collar occupations	124.7	125.3	126.1	127.1	128.2	129.6	130.1	130.6	131.9	1.0	2.9
Excluding sales occupations	123.2	123.9	124.8	126.0	127.0	128.4	128.9	129.3	130.5	.9	2.8
Blue-collar occupations	121.6	122.2	123.1	124.2	125.4	126.3	127.3	128.0	129.2	.9	3.0
Durables	122.9	123.6	124.3	125.1	126.5	127.7	128.4	129.0	130.1	.9	2.8
Nondurables	122.9	123.3	124.4	125.8	126.5	127.6	128.5	129.3	130.6	1.0	3.2
Service-producing	121.6	122.6	123.2	124.7	125.8	126.7	127.5	129.0	130.1	.9	3.4
Excluding sales occupations	122.5	123.4	124.2	125.6	126.5	127.6	128.3	129.7	130.9	.9	3.5
White-collar occupations	122.3	123.2	124.0	125.6	126.8	127.8	128.5	130.1	131.2	.8	3.5
Excluding sales occupations	123.8	124.7	125.6	127.2	128.1	129.5	129.9	131.5	132.7	.9	3.6
Blue-collar occupations	120.3	121.1	121.4	122.7	123.5	123.8	124.8	126.0	127.2	1.0	3.0
Service occupations	119.8	120.7	121.3	122.0	122.8	124.0	125.6	126.5	127.5	.8	3.8
Transportation and public utilities	122.0	122.9	123.7	124.6	125.0	125.9	127.0	128.2	128.8	.5	3.0
Transportation	119.8	121.0	121.6	122.9	123.2	123.8	124.7	126.5	126.9	.3	3.0
Public utilities	124.5	125.2	126.1	126.5	127.1	128.4	129.8	130.1	130.9	.6	3.0
Communications	124.6	125.3	126.2	126.1	126.5	128.2	130.3	129.8	130.6	.6	3.2
Electric, gas, and sanitary services	124.4	125.2	125.9	127.0	127.7	128.5	129.0	130.4	131.2	.6	2.7
Wholesale and retail trade	120.6	121.6	122.3	123.9	124.8	125.8	127.0	128.5	129.7	.9	3.9
Excluding sales occupations	120.9	121.9	123.2	124.4	124.9	126.5	127.7	129.3	131.1	1.4	5.0
Wholesale trade	122.7	123.9	125.5	126.1	128.0	128.5	129.6	131.4	132.2	.6	3.3
Excluding sales occupations	122.9	123.7	125.7	126.3	127.6	128.9	129.8	131.8	132.8	.8	4.1
Retail trade	119.6	120.5	120.6	122.8	123.1	124.4	125.8	127.1	128.5	1.1	4.4
Food stores	117.6	118.6	119.1	120.5	121.2	123.1	124.7	124.8	124.7	–.1	2.9
General merchandise stores	118.5	119.0	120.1	121.0	121.7	122.6	124.7	125.0	126.2	1.0	3.7

See footnotes at end of table.

22. Continued—Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	1995			1996				1997		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 1997	
Finance, insurance, and real estate	117.0	118.0	118.4	119.8	121.9	122.2	122.2	124.5	125.3	0.6	2.8
Excluding sales occupations	120.2	121.1	121.3	123.4	124.5	126.0	125.3	127.2	128.1	.7	2.9
Banking, savings and loan, and other credit agencies	119.7	120.4	120.1	122.7	124.2	126.8	123.8	125.9	126.8	.7	2.1
Insurance	120.8	121.1	122.2	123.6	124.1	125.4	126.0	127.9	128.0	.1	3.1
Services	124.4	125.3	126.0	127.6	128.7	129.7	130.5	131.8	133.0	.9	3.3
Business services	122.9	123.6	124.3	126.9	127.7	128.5	130.1	131.4	132.4	.8	3.7
Health services	126.7	127.5	128.4	129.3	130.1	130.8	131.4	132.5	133.2	.5	2.4
Hospitals	125.9	126.6	127.7	128.5	129.1	129.7	130.3	130.7	131.2	.4	1.6
Educational services	125.9	128.6	129.4	130.1	130.4	133.3	133.8	134.5	134.5	.2	3.4
Colleges and universities	125.9	129.0	130.1	130.6	130.9	133.4	133.8	134.6	135.0	.3	3.1
Nonmanufacturing	120.9	121.9	122.5	123.9	125.1	125.9	126.8	128.2	129.3	.9	3.4
White-collar workers	122.1	123.1	123.8	125.4	126.6	127.6	128.3	129.9	131.0	.8	3.5
Excluding sales occupations	123.5	124.4	125.4	126.9	127.8	129.2	129.6	131.2	132.4	.9	3.6
Blue-collar occupations	118.5	119.4	119.8	120.9	122.0	122.4	123.1	124.1	125.5	1.1	2.9
Service occupations	119.8	120.6	121.2	122.0	122.7	123.9	125.5	126.4	127.4	.8	3.8
State and local government workers	124.6	126.6	127.3	127.8	128.1	130.1	130.9	131.4	131.5	.1	2.7
Workers, by occupational group:											
White-collar workers	124.8	126.8	127.4	127.9	128.2	130.3	131.1	131.4	131.5	.1	2.6
Professional specialty and technical	125.0	127.4	128.0	128.3	128.6	131.1	131.7	131.9	132.0	.1	2.6
Executive, administrative, and managerial	124.3	126.0	126.9	127.7	128.0	129.3	130.2	131.3	131.7	.3	2.9
Administrative support, including clerical	122.9	124.4	125.1	125.8	126.1	127.7	129.0	129.2	129.5	.2	2.7
Blue-collar workers	123.8	124.8	125.7	126.6	127.0	127.9	128.8	129.6	129.8	.2	2.2
Workers, by industry division:											
Services	125.1	127.6	128.2	128.6	128.9	131.2	131.9	132.1	132.2	.1	2.6
Services excluding schools[4]	125.5	126.9	127.4	128.2	128.7	130.1	130.5	131.2	131.6	.3	2.3
Health services	126.6	127.9	128.6	129.3	129.9	131.1	131.4	132.1	132.6	.4	2.1
Hospitals	126.3	127.6	128.4	129.1	129.7	130.9	131.3	131.9	132.4	.4	2.1
Educational services	124.9	127.7	128.3	128.5	128.8	131.3	132.0	132.1	132.2	.1	2.6
Schools	125.1	127.8	128.4	128.7	128.9	131.4	132.2	132.2	132.3	.1	2.6
Elementary and secondary	125.8	128.7	129.2	129.3	129.5	132.0	132.4	132.4	132.6	.2	2.4
Colleges and universities	122.9	125.0	125.9	126.8	127.1	129.8	131.2	131.5	131.4	–.1	3.4
Public administration[2]	122.3	123.2	124.1	124.9	125.3	126.6	127.7	128.9	129.0	.1	3.0

[1] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[4] Includes, for example, library, social, and health services.

23. Employment Cost Index, benefits, private industry workers by occupation and industry group

[June 1989 = 100]

Series	1995			1996				1997		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 1997	
Private industry workers	135.1	135.6	135.9	136.6	137.4	138.1	138.6	139.4	140.1	0.5	2.0
Workers, by occupational group:											
White-collar workers	136.0	136.6	136.7	137.7	138.4	139.5	139.7	140.8	141.5	.5	2.2
Blue-collar workers	133.6	134.1	134.7	135.2	136.1	136.2	137.0	137.2	138.0	.6	1.4
Workers, by industry division:											
Goods-producing	135.9	136.2	137.1	137.7	138.6	138.8	139.7	139.9	140.9	.7	1.7
Service-producing	134.1	134.8	134.7	135.5	136.2	137.2	137.4	138.5	139.2	.5	2.2
Manufacturing	135.2	135.5	136.7	137.5	138.5	138.8	139.8	139.9	141.0	.8	1.8
Nonmanufacturing	134.7	135.4	135.3	136.0	136.7	137.5	137.9	138.9	139.5	.4	2.0

24. Employment Cost Index, private nonfarm workers by bargaining status, region, and area size

[June 1989 = 100]

Series	1995			1996				1997		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended June 1997	12 months ended June 1997
COMPENSATION											
Workers, by bargaining status[1]											
Union	125.8	126.8	127.7	128.5	129.7	130.1	130.8	131.0	131.8	0.6	1.6
Goods-producing	125.9	126.7	127.5	127.9	129.0	129.2	129.8	130.0	131.2	.9	1.7
Service-producing	125.6	126.8	127.9	129.0	130.3	131.0	131.7	131.9	132.4	.4	1.6
Manufacturing	126.6	127.1	128.1	128.8	129.8	129.8	130.6	130.8	131.7	.7	1.5
Nonmanufacturing	125.0	126.2	127.1	128.0	129.2	129.9	130.4	130.6	131.5	.7	1.8
Nonunion	125.2	126.0	126.5	127.7	128.7	129.7	130.4	131.8	132.8	.8	3.2
Goods-producing	125.9	126.4	127.2	128.3	129.4	130.4	131.3	132.0	133.2	.9	2.9
Service-producing	124.8	125.6	126.0	127.3	128.3	129.2	129.9	131.5	132.5	.8	3.3
Manufacturing	126.9	127.3	128.3	129.3	130.5	131.7	132.5	133.1	134.4	1.0	3.0
Nonmanufacturing	124.5	125.3	125.7	127.0	128.0	128.9	129.6	131.1	132.2	.8	3.3
Workers, by region[1]											
Northeast	126.6	127.4	127.8	128.9	129.7	130.6	131.1	132.2	133.1	.7	2.6
South	124.3	125.2	125.6	127.0	127.8	128.8	129.7	130.8	131.5	.5	2.9
Midwest (formerly North Central)	126.9	127.7	128.3	129.5	130.7	131.3	132.1	133.3	134.7	1.1	3.1
West	123.4	123.9	125.0	125.9	127.3	128.3	128.9	130.3	131.4	.8	3.2
Workers, by area size[1]											
Metropolitan areas	125.4	126.2	126.8	128.0	129.1	130.0	130.6	131.7	132.8	.8	2.9
Other areas	125.3	126.1	126.5	127.2	128.0	128.7	130.2	131.4	132.4	.8	3.4
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union	120.6	121.5	122.2	122.8	124.2	124.8	125.4	126.0	126.9	.7	2.2
Goods-producing	119.3	120.2	120.6	121.3	122.5	123.2	123.6	124.1	125.4	1.0	2.4
Service-producing	122.3	123.2	124.2	124.8	126.2	126.8	127.6	128.2	128.8	.5	2.1
Manufacturing	120.5	121.3	122.0	122.9	123.9	124.5	125.2	125.6	126.5	.7	2.1
Nonmanufacturing	120.6	121.6	122.3	122.8	124.3	124.9	125.5	126.1	127.1	.8	2.3
Nonunion	121.8	122.6	123.3	124.8	125.9	126.9	127.7	129.1	130.3	.9	3.5
Goods-producing	122.2	122.9	123.8	124.9	126.1	127.3	128.0	128.9	130.2	1.0	3.3
Service-producing	121.5	122.4	123.0	124.6	125.7	126.6	127.5	129.1	130.2	.9	3.6
Manufacturing	123.8	124.3	125.2	126.3	127.5	128.8	129.6	130.3	131.7	1.1	3.3
Nonmanufacturing	121.0	121.9	122.6	124.2	125.2	126.1	127.0	128.5	129.7	.9	3.6
Workers, by region[1]											
Northeast	122.1	123.1	123.6	124.9	126.0	127.0	127.7	128.8	129.8	.8	3.0
South	120.8	121.8	122.4	124.1	125.1	126.0	127.0	128.5	129.4	.7	3.4
Midwest (formerly North Central)	122.2	123.0	123.6	125.1	126.2	126.9	127.7	129.0	130.4	1.1	3.3
West	120.9	121.4	122.7	123.3	124.8	125.8	126.5	127.7	128.9	.9	3.3
Workers, by area size[1]											
Metropolitan areas	121.6	122.4	123.2	124.6	125.8	126.7	127.4	128.7	129.9	.9	3.3
Other areas	121.3	122.1	122.4	123.4	124.2	125.0	126.5	127.7	128.8	.9	3.7

[1] The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see the *Monthly Labor Review* Technical Note, "Estimation procedures for the Employment Cost Index," May 1982.

25. Percent of full-time employees participating in employer-provided benefit plans, 1980–91

Item	Medium and large private establishments[1]										Small private establishments[2]	State and local governments[3]	
	1980	1981	1982	1983	1984	1985	1986	1988	1989	1991	1990	1987	1990
Time-off plans													
Participants with:													
Paid lunch time	10	10	9	11	9	10	10	11	10	8	8	17	11
Average minutes per day	–	–	25	25	26	27	27	29	26	30	37	34	36
Paid rest time	75	75	76	74	73	72	72	72	71	67	48	58	56
Average minutes per day	–	–	25	25	26	26	26	26	26	26	27	29	29
Paid funeral leave	–	–	–	–	–	88	88	85	84	80	47	56	63
Average days per occurrence	–	–	–	–	–	3.2	3.2	3.2	3.3	3.3	2.9	3.7	3.7
Paid holidays	99	99	99	99	99	98	99	96	97	92	84	81	74
Average days per year	10.1	10.2	10.0	9.8	9.8	10.1	10.0	9.4	9.2	10.2	9.5	10.9	13.6
Paid personal leave	20	23	24	25	23	26	25	24	22	21	11	38	39
Average days per year	–	–	3.8	3.7	3.6	3.7	3.7	3.3	3.1	3.3	2.8	2.7	2.9
Paid vacations	100	99	99	100	99	99	100	98	97	96	88	72	67
Paid sick leave	62	65	67	67	67	67	70	69	68	67	47	97	95
Unpaid maternity leave	–	–	–	–	–	–	–	33	37	37	17	57	51
Unpaid sick leave	–	–	–	–	–	–	–	16	18	26	8	30	33
Insurance plans													
Participants in medical care plans	97	97	97	96	97	96	95	90	92	83	69	93	93
Participants with coverage for:													
Home health care	–	–	–	37	46	56	66	76	75	81	79	76	82
Extended care facilities	58	60	62	58	62	67	70	79	80	80	83	78	79
Mental health care	98	99	99	99	99	99	99	98	97	98	98	98	99
Alcohol abuse treatment	–	–	50	53	61	68	70	80	97	97	97	87	99
Drug abuse treatment	–	–	37	43	52	61	66	74	96	96	94	86	98
Participants with employee contribution required for:													
Self coverage	26	27	27	33	36	36	43	44	47	51	42	35	38
Average monthly contribution	–	–	–	$ 10.13	$ 11.93	$ 12.05	$ 12.80	$ 19.29	$ 25.31	$ 26.60	$25.13	$ 15.74	$25.53
Family coverage	46	49	51	54	58	56	63	64	66	69	67	71	65
Average monthly contribution[5]	–	–	–	$ 32.51	$ 35.93	$ 38.33	$ 41.40	$ 60.07	$ 72.10	$ 96.97	$109.34	$ 71.89	$ 117.59
Participants in life insurance plans	96	96	96	96	96	96	96	92	94	94	64	85	88
Participants with:													
Accidental death and dismemberment insurance	69	72	72	72	74	73	72	76	71	71	78	67	67
Survivor income benefits	–	–	–	–	–	13	10	8	7	6	1	1	1
Retiree protection available	–	64	64	66	64	62	59	49	42	44	19	55	45
Participants in long-term disability insurance plans	40	41	43	45	47	48	48	42	45	40	19	31	27
Participants in sickness and accident insurance plans	54	50	51	49	51	52	49	46	43	45	26	14	21
Retirement plans													
Participants in defined benefit pension plans[6]	84	84	84	82	82	80	76	63	63	59	20	93	90
Participants with:													
Normal retirement prior to age 65	55	56	58	64	63	67	64	59	62	55	54	92	89
Early retirement available	98	98	97	97	97	97	96	98	97	98	95	90	88
Ad hoc pension increases in last 5 years	–	–	–	51	47	41	35	26	22	7	7	33	16
Terminal earnings formula	53	50	52	54	54	57	57	55	64	56	58	100	100
Benefit coordinated with Social Security	45	43	45	55	56	61	62	62	63	54	49	18	8
Participants in defined contribution plans	–	–	–	–	–	53	60	45	48	48	31	9	9
Participants in plans with tax-deferred savings arrangements	–	–	–	–	–	26	33	36	41	44	17	28	45
Other benefits													
Employees eligible for:													
Flexible benefits plans	–	–	–	–	–	–	2	5	9	10	1	5	5
Reimbursement accounts	–	–	–	–	–	–	5	12	23	36	8	5	31

[1] From 1979 to 1986, data were collected in private sector establishments with a minimum employment varying from 50 to 250 employees, depending upon industry. In addition, coverage in service industries was limited. Beginning in 1988, data were collected in all private sector establishments employing 100 workers or more in all industries.

[2] Includes private sector establishments with fewer than 100 workers.

[3] In 1987, coverage excluded local governments employing fewer than 50 workers. In 1990, coverage included all State and local governments.

[4] Data exclude college teachers.

[5] Data for 1983 refer to the average monthly employee contribution for dependent coverage, excluding the employee. Beginning in 1984, the data refer to the average monthly employee contribution for family coverage, which includes the employee.

[6] Prior to 1985, data on participation in defined benefit pension plans included a small percentage of workers participating in money purchase pension plans. Beginning in 1985, these workers were classified as participating in defined contribution plans.

[7] Includes employees who participated in Payroll-based Employee Stock Ownership Plans. Beginning in 1987, these plans were no longer available.

NOTE: Dash indicates data were not collected in this year.

26. Work stoppages involving 1,000 workers or more

Measure	Annual totals		1996						1997						
	1995	1996	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.[p]	Feb.[p]	Mar.[p]	Apr.[p]	May[p]	June[p]	July[p]
Number of stoppages:															
Beginning in period	31	37	2	0	3	5	2	1	1	0	1	6	6	0	2
In effect during period	34	38	7	5	6	8	7	5	6	4	4	7	12	3	4
Workers involved:															
Beginning in period (in thousands)	192	273	3.6	.0	6.3	15.5	3.3	2.1	4.3	.0	2.7	55.8	16.9	.0	24.6
In effect during period (in thousands)	207	275	24.6	17.9	16.6	22.9	19.5	12.0	16.3	9.9	10.1	60.6	60.5	12.0	35.3
Days idle:															
Number (in thousands)	5,771	4,889	379.4	364.2	194.7	243.9	234.6	226.8	237.8	170.6	144.3	537.7	567.4	231.2	228.5
Percent of estimated working time[1]	.02	.02	.01	.01	.01	.01	.01	.01	.01	.01	.01	.02	.02	.01	.01

[1] Agricultural and government employees are included in the total employed and total working time; private household, forestry, and fishery employees are excluded. An explanation of the measurement of idleness as a percentage of the total time worked is found in " 'Total economy' measures of strike idleness," *Monthly Labor Review*, October 1968, pp. 54–56.

[p] = preliminary.

27. Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS															
All items	152.4	156.9	157.8	158.3	158.6	158.6	159.1	159.6	160.0	160.2	160.1	160.3	160.5	160.8	161.2
All items (1967 = 100)	456.5	469.9	472.7	474.1	475.0	475.0	476.7	478.2	479.3	479.7	479.6	480.2	480.7	481.6	483.0
Food and beverages	148.9	153.7	155.0	155.8	156.2	156.6	156.9	156.9	157.1	157.1	157.1	157.1	157.5	158.1	158.4
Food	148.4	153.3	154.6	155.4	155.9	156.3	156.5	156.5	156.6	156.6	156.6	156.6	157.0	157.6	157.9
Food at home	148.8	154.3	155.9	156.8	157.2	157.7	157.9	157.7	157.7	157.5	157.5	157.3	157.7	158.5	158.6
Cereals and bakery products	167.5	174.0	174.7	175.1	175.4	175.7	176.5	176.7	176.7	176.9	176.9	178.2	178.3	178.6	178.1
Meats, poultry, fish, and eggs	138.8	144.8	147.2	147.9	148.9	150.0	149.6	148.8	147.8	147.7	147.7	147.9	148.2	149.1	149.1
Dairy products	132.8	142.1	146.7	149.3	149.3	148.6	147.8	146.2	146.1	145.7	145.4	144.1	143.3	143.4	143.5
Fruits and vegetables	177.7	183.9	183.6	185.1	186.3	187.2	187.3	187.4	189.3	186.4	186.4	183.7	184.6	187.3	188.1
Other foods at home	140.8	142.9	143.6	143.9	143.4	143.6	144.8	145.4	145.5	146.9	147.1	147.8	148.6	148.7	148.9
Sugar and sweets	137.5	143.7	145.4	145.7	144.2	144.7	146.9	147.2	146.3	147.9	147.9	148.1	149.2	147.8	148.5
Fats and oils	137.3	140.5	141.5	141.6	140.8	140.7	142.3	142.7	142.4	142.4	142.0	141.6	141.4	141.4	142.0
Nonalcoholic beverages	131.7	128.6	127.9	127.6	127.2	126.9	128.3	128.5	129.5	131.9	133.4	134.8	136.3	136.7	136.7
Other prepared foods	151.1	156.2	157.5	158.5	158.3	158.9	159.4	160.6	160.3	161.1	160.4	161.2	161.3	161.8	161.9
Food away from home	149.0	152.7	153.5	154.2	154.7	155.0	155.3	155.6	156.0	156.2	156.3	156.6	157.1	157.4	157.8
Alcoholic beverages	153.9	158.5	159.5	160.1	160.2	160.5	161.1	161.8	162.1	162.3	162.8	162.7	162.9	163.2	163.5
Housing	148.5	152.8	153.9	154.0	153.9	154.0	155.1	155.8	155.9	155.8	155.9	156.9	157.5	157.6	157.7
Shelter	165.7	171.0	172.0	172.5	172.4	172.3	173.6	174.6	175.2	175.3	175.3	176.0	177.0	177.5	177.2
Renters' costs (12/82 = 100)	174.3	180.2	180.9	181.3	179.9	179.1	182.7	185.3	186.8	186.3	185.3	186.6	188.4	189.1	186.8
Rent, residential	157.8	162.0	162.9	163.3	163.7	164.0	164.4	164.8	165.1	165.5	165.9	166.4	166.8	167.3	167.8
Other renters' costs	204.3	214.7	214.8	214.9	207.9	203.8	217.3	226.4	231.7	228.0	222.9	226.7	232.6	233.9	222.8
Homeowners' costs (12/82 = 100)	171.0	176.5	177.5	178.1	178.6	178.8	179.1	179.5	179.8	180.2	180.6	181.1	181.7	182.2	182.8
Owners' equivalent rent (12/82 = 100)	171.3	176.8	177.9	178.4	178.9	179.1	179.5	179.9	180.1	180.5	180.9	181.4	182.1	182.6	183.2
Household insurance	157.4	161.0	162.3	163.4	164.6	162.4	162.6	163.8	163.3	163.8	164.5	165.3	165.7	166.3	166.8
Maintenance and repairs	135.0	139.0	139.9	140.2	141.1	141.5	141.5	142.3	142.4	142.5	143.2	143.3	145.4	145.5	142.6
Maintenance and repair services	139.8	145.5	147.4	147.3	147.6	148.0	148.2	148.4	148.4	148.9	149.9	150.0	153.8	154.4	150.2
Maintenance and repair commodities	128.5	130.2	129.5	130.5	132.3	132.6	132.5	133.9	134.3	133.6	134.1	134.1	133.7	133.1	132.1
Fuel and other utilities	123.7	127.5	129.8	128.7	128.4	129.4	130.8	131.0	129.9	128.9	129.0	131.9	132.1	131.4	132.1
Fuels	111.5	115.2	118.4	116.2	115.7	117.1	119.1	119.2	117.2	115.3	115.3	119.8	119.6	118.6	119.7
Fuel oil, coal, and bottled gas	88.1	99.2	95.6	102.9	105.9	110.3	111.5	109.6	105.5	102.1	100.4	98.0	94.7	93.5	93.7
Gas (piped) and electricity	119.2	122.1	126.2	122.7	121.7	122.8	124.9	125.3	123.4	121.7	121.9	127.5	127.8	126.7	128.1
Other utilities and public services	152.8	157.2	158.3	158.6	158.9	159.1	159.7	160.2	160.5	160.8	161.1	161.7	162.4	162.1	162.3
Household furnishings and operations	123.0	124.7	125.1	125.0	124.8	125.0	124.9	125.2	125.4	125.5	125.8	125.7	125.6	125.2	125.4
Housefurnishings	111.2	111.3	111.5	111.1	110.8	111.0	110.8	111.2	111.1	111.1	111.5	111.2	110.7	110.2	110.2
Housekeeping supplies	137.1	141.1	141.2	141.6	141.8	141.4	142.3	142.5	142.8	143.3	143.0	142.9	144.0	142.9	143.2
Housekeeping services	143.7	148.0	149.4	149.9	149.6	150.1	149.6	149.9	150.6	151.1	151.3	151.8	152.1	152.6	153.2
Apparel and upkeep	132.0	131.7	131.5	133.4	133.4	130.3	129.6	131.9	134.5	136.1	135.3	132.4	130.2	130.0	133.0
Apparel commodities	128.7	128.2	127.8	130.0	129.9	126.5	125.8	128.2	131.0	132.7	131.8	128.6	126.2	125.9	129.2
Men's and boys' apparel	126.2	127.7	127.4	129.2	131.2	127.8	127.0	127.3	129.2	131.4	132.0	129.0	128.0	128.9	131.4
Women's and girls' apparel	126.9	124.7	123.6	127.1	126.7	123.3	121.5	126.1	130.1	131.9	129.9	125.6	121.1	120.3	126.0
Infants' and toddlers' apparel	127.2	129.7	131.4	128.5	126.7	126.9	127.9	127.2	129.7	133.7	133.8	132.9	131.3	127.3	126.7
Footwear	125.4	126.6	126.7	128.0	127.7	125.9	125.0	126.3	127.0	129.3	129.1	126.3	125.9	126.3	127.4
Other apparel commodities	152.4	150.6	151.9	152.0	149.0	141.6	145.6	146.9	149.5	148.1	146.0	146.4	146.9	145.8	145.3
Apparel services	157.3	159.8	160.4	160.6	160.9	161.5	161.7	162.2	162.4	162.6	162.9	163.2	163.5	163.6	163.7
Transportation	139.1	143.0	143.2	143.9	144.8	145.2	145.0	144.8	144.9	144.8	144.4	144.0	143.7	143.8	144.3
Private transportation	136.3	140.0	140.0	140.5	141.5	141.7	141.8	141.9	141.5	141.3	141.0	140.7	140.1	140.8	141.0
New vehicles	141.0	143.7	143.2	143.8	144.8	145.4	145.4	145.4	145.4	145.2	144.6	144.2	143.7	143.0	142.7
New cars	139.0	141.4	141.0	141.5	142.3	143.0	143.0	142.9	142.9	142.6	142.1	141.7	141.1	140.4	140.0
Used cars	156.5	157.0	157.0	157.0	156.5	155.6	154.7	154.4	154.4	154.3	153.9	151.8	149.9	148.5	148.2
Motor fuel	100.0	106.3	106.2	105.9	107.8	108.6	108.6	108.1	106.4	106.0	105.7	105.9	103.9	107.6	109.3
Gasoline	99.8	105.9	105.7	105.2	107.1	107.9	107.9	107.4	105.8	105.4	105.2	105.4	103.5	107.4	109.2
Maintenance and repair	154.0	158.4	160.0	160.5	160.5	160.6	161.1	161.2	161.5	161.9	162.2	162.6	162.9	163.3	163.5
Other private transportation	170.6	173.9	174.1	175.4	176.2	176.0	176.2	177.1	177.4	177.3	177.0	176.7	177.5	177.4	176.9
Other private transportation commodities	104.8	105.1	105.0	105.0	105.1	105.2	105.2	105.4	105.1	104.7	104.7	104.7	105.3	104.8	104.6
Other private transportation services	186.0	190.1	190.3	192.0	193.0	192.7	193.0	194.1	194.5	194.5	194.2	193.8	194.5	194.5	194.0
Public transportation	175.9	181.9	184.6	187.2	187.3	189.9	185.8	182.4	188.1	189.8	188.1	186.6	189.4	183.4	186.0
Medical care	220.5	228.2	229.4	230.1	230.5	230.6	231.8	232.7	233.4	233.8	234.2	234.4	234.8	235.2	235.4
Medical care commodities	204.5	210.4	211.2	212.4	211.9	212.0	212.8	213.9	214.7	215.2	215.6	216.0	216.0	215.5	215.3
Medical care services	224.2	232.4	233.6	234.2	234.9	235.0	236.3	237.1	237.7	238.1	238.5	238.7	239.2	239.8	240.0
Professional services	201.0	208.3	209.6	210.2	210.9	211.0	212.2	213.2	214.2	214.7	215.2	215.5	215.9	216.3	216.4
Hospital and related services	257.8	269.5	271.6	272.4	273.2	273.7	275.7	276.6	276.7	277.0	277.3	277.4	278.1	279.0	279.4
Entertainment	153.9	159.1	159.8	160.1	160.7	160.8	161.3	161.8	162.1	162.2	162.2	162.7	162.6	163.0	163.0
Entertainment commodities	138.7	143.0	143.3	143.6	144.0	144.1	144.2	144.3	144.5	144.1	143.9	143.9	143.8	144.6	144.7
Entertainment services	172.0	178.1	179.1	179.5	180.3	180.5	181.3	182.1	182.7	183.3	183.5	184.5	184.5	184.3	184.2
Other goods and services	206.9	215.4	218.3	218.8	219.2	218.7	220.0	220.7	221.4	222.7	223.1	223.1	223.5	225.7	228.1
Tobacco products	225.7	232.8	234.1	235.3	236.2	234.3	236.4	237.4	238.2	243.2	243.8	241.3	242.0	243.4	246.5
Personal care	147.1	150.1	150.8	150.9	151.2	150.5	151.6	151.5	151.8	152.7	152.6	152.8	152.6	152.5	152.7
Toilet goods and personal care appliances	143.1	144.3	145.1	144.6	144.7	142.8	143.6	143.3	143.6	144.5	144.1	144.2	143.7	143.5	143.7
Personal care services	151.5	156.6	157.2	157.9	158.6	159.2	160.7	160.7	161.2	162.0	162.3	162.6	162.5	162.7	162.7
Personal and educational expenses	235.5	247.5	252.1	252.5	252.8	252.9	254.0	255.0	255.8	256.0	256.6	257.3	258.0	261.6	264.9
School books and supplies	214.4	226.9	229.9	230.5	230.7	231.1	234.5	235.3	235.4	235.8	235.9	237.2	237.7	240.0	241.5
Personal and educational services	237.3	249.3	254.0	254.3	254.7	254.8	255.8	256.7	257.6	257.7	258.3	259.1	259.8	263.5	266.9

27. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
All items	152.4	156.9	157.8	158.3	158.6	158.6	159.1	159.6	160.0	160.2	160.1	160.3	160.5	160.8	161.2
Commodities	136.4	139.9	140.3	141.0	141.5	141.4	141.5	141.8	142.0	142.3	142.1	141.5	141.0	141.4	142.1
Food and beverages	148.9	153.7	155.0	155.8	156.2	156.6	156.9	156.9	157.1	157.1	157.1	157.1	157.5	158.1	158.4
Commodities less food and beverages	128.9	131.5	131.4	132.1	132.6	132.1	132.1	132.6	132.9	133.2	132.9	132.0	131.0	131.3	132.2
Nondurables less food and beverages	129.5	133.0	133.0	134.0	134.7	133.7	133.8	134.6	135.0	135.8	135.4	134.2	132.9	133.8	135.5
Apparel commodities	128.7	128.2	127.8	130.0	129.9	126.5	125.8	128.2	131.0	132.7	131.8	128.6	126.2	125.9	129.2
Nondurables less food, beverages, and apparel	132.9	138.6	138.7	139.2	140.3	140.5	141.0	141.0	140.2	140.6	140.4	140.1	139.3	140.8	141.9
Durables	128.0	129.4	129.2	129.3	129.6	129.9	129.7	129.8	129.9	129.6	129.4	129.0	128.3	127.7	127.6
Services	168.7	174.1	175.6	175.8	175.9	176.1	177.0	177.7	178.2	178.3	178.4	179.3	180.1	180.3	180.6
Rent of shelter (12/82 = 100)	172.4	178.0	179.0	179.4	179.4	179.3	180.6	181.6	182.3	182.4	182.4	183.1	184.1	184.7	184.4
Household services less rent of shelter (12/82 = 100)	138.3	142.0	144.6	143.2	142.9	143.4	144.6	145.0	144.3	143.7	144.0	147.0	147.5	146.9	147.7
Transporatation services	175.9	180.5	181.6	183.2	183.7	184.1	183.5	183.4	184.9	185.4	184.9	184.5	185.6	184.3	184.7
Medical care services	224.2	232.4	233.6	234.2	234.9	235.0	236.3	237.1	237.7	238.1	238.5	238.7	239.2	239.8	240.0
Other services	193.3	201.4	203.9	204.3	204.8	205.0	205.9	206.7	207.3	207.7	208.0	208.8	209.1	210.7	212.2
Special indexes:															
All items less food	153.1	157.5	158.4	158.8	159.0	159.0	159.6	160.2	160.6	160.8	160.7	161.0	161.1	161.3	161.8
All items less shelter	148.6	152.8	153.8	154.2	154.6	154.7	155.0	155.3	155.6	155.8	155.7	155.7	155.6	155.9	156.6
All items less homeowners' costs (12/82 = 100)	153.5	157.9	158.9	159.4	159.6	159.6	160.2	160.8	161.2	161.2	161.1	161.2	161.3	161.6	162.0
All items less medical care	148.6	152.8	153.8	154.2	154.5	154.5	155.0	155.5	155.9	156.0	155.9	156.1	156.3	156.6	157.1
Commodities less food	129.8	132.6	132.5	133.2	133.7	133.3	133.3	133.8	134.1	134.4	134.1	133.3	132.3	132.6	133.5
Nondurables less food	130.9	134.5	134.5	135.5	136.1	135.3	135.4	136.2	136.6	137.4	137.0	135.9	134.7	135.5	137.2
Nondurables less food and apparel	134.1	139.5	139.8	140.3	141.2	141.5	142.0	142.1	141.4	141.7	141.7	141.4	140.8	142.1	143.0
Nondurables	139.3	143.5	144.1	145.1	145.6	145.3	145.5	145.9	146.2	146.6	146.4	145.8	145.4	146.1	147.1
Services less rent of shelter (12/82 = 100)	176.8	182.5	184.6	184.6	184.8	185.2	185.9	186.4	186.7	186.8	186.9	188.1	188.8	188.7	189.5
Services less medical care	163.5	168.7	170.2	170.4	170.4	170.6	171.5	172.2	172.7	172.8	172.8	173.8	174.6	174.8	175.1
Energy	105.2	110.1	111.7	110.5	111.1	112.2	113.3	113.1	111.2	110.0	109.9	112.3	111.4	112.5	113.9
All items less energy	158.7	163.1	164.0	164.7	164.9	164.8	165.3	165.9	166.5	166.8	166.8	166.7	167.0	167.3	167.6
All items less food and energy	161.2	165.6	166.4	167.0	167.2	167.0	167.5	168.3	169.0	169.4	169.3	169.2	169.5	169.6	170.0
Commodities less food and energy	139.3	141.3	141.4	142.0	142.2	141.5	141.5	142.2	143.0	143.5	143.3	142.2	141.5	141.2	142.0
Energy commodities	98.8	105.7	105.2	105.8	107.9	109.1	109.2	108.6	106.6	105.8	105.3	105.2	103.1	106.2	107.7
Services less energy	173.7	179.4	180.7	181.2	181.4	181.5	182.4	183.1	183.8	184.1	184.1	184.6	185.4	185.8	186.0
Purchasing power of the consumer dollar:															
1982–84 = $1.00	.656	.638	.634	.632	.631	.631	.628	.626	.625	.624	.625	.624	.623	.622	.620
1967 = $1.00	.219	.213	.212	.211	.211	.211	.210	.209	.209	.208	.209	.208	.208	.208	.207
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS															
All items	149.8	154.1	155.1	155.5	155.9	155.9	156.3	156.8	157.0	157.2	157.2	157.4	157.5	157.8	158.3
All items (1967 = 100)	446.1	459.1	461.9	463.2	464.2	464.3	465.7	467.0	467.8	468.3	468.3	468.8	469.0	470.0	471.5
Food and beverages	148.3	153.2	154.5	155.2	155.7	156.1	156.4	156.4	156.5	156.5	156.6	156.6	157.0	157.6	157.8
Food	147.9	152.8	154.1	154.9	155.4	155.8	156.1	156.0	156.1	156.1	156.1	156.1	156.6	157.1	157.4
Food at home	147.9	153.5	155.1	155.9	156.4	156.9	157.1	156.8	156.7	156.6	156.6	156.5	156.9	157.6	157.7
Cereals and bakery products	167.2	173.6	174.3	174.7	175.1	175.4	176.2	176.4	176.4	176.6	176.7	177.9	177.9	178.2	177.7
Meats, poultry, fish, and eggs	138.5	144.5	146.8	147.5	148.6	149.8	149.3	148.4	147.4	147.3	147.4	147.5	148.0	148.8	148.7
Dairy products	132.5	141.9	146.4	148.9	149.2	148.5	147.6	146.0	145.8	145.4	145.1	143.8	143.0	143.0	143.2
Fruits and vegetables	176.7	183.1	183.2	184.1	185.2	186.0	186.1	186.1	188.2	185.2	185.4	183.1	184.0	186.9	187.5
Other foods at home	140.3	142.6	143.2	143.5	143.0	143.2	144.4	145.0	145.1	146.4	146.6	147.2	147.9	148.0	148.2
Sugar and sweets	137.5	143.6	145.3	145.6	144.0	144.5	146.8	147.2	146.2	147.9	147.9	148.1	149.2	147.8	148.4
Fats and oils	137.1	140.3	141.2	141.3	140.5	140.4	141.9	142.3	142.2	142.1	141.7	141.3	141.1	141.2	141.7
Nonalcoholic beverages	131.0	128.1	127.4	127.1	126.7	126.5	127.9	128.0	128.9	131.1	132.4	133.6	134.9	135.2	135.2
Other prepared foods	150.8	156.0	157.2	158.2	158.2	158.8	159.3	160.4	160.1	161.0	160.3	160.9	161.2	161.6	161.8
Food away from home	148.8	152.6	153.4	154.2	154.7	155.0	155.4	155.7	156.0	156.2	156.2	156.6	157.1	157.4	157.8
Alcoholic beverages	153.3	157.9	158.9	159.5	159.6	159.9	160.4	161.1	161.5	161.7	162.2	162.1	162.2	162.5	162.6
Housing	145.4	149.6	150.8	150.7	150.7	151.0	151.8	152.4	152.5	152.4	152.6	153.6	154.1	154.2	154.4
Shelter	161.2	166.2	167.2	167.6	167.7	167.7	168.6	169.4	169.9	170.1	170.3	170.9	171.7	172.3	172.2
Renters' costs (12/84 = 100)	152.5	157.3	158.1	158.3	157.6	157.3	159.4	160.9	161.9	161.8	161.6	162.6	163.7	164.3	163.1
Rent, residential	157.4	161.6	162.6	162.9	163.4	163.7	164.1	164.4	164.7	165.2	165.6	166.0	166.5	167.0	167.5
Other renters' costs	204.4	214.6	215.0	214.6	207.4	203.7	216.3	224.9	229.9	226.9	222.9	227.3	232.9	234.2	223.1
Homeowners' costs (12/84 = 100)	156.0	160.9	161.9	162.4	162.8	163.0	163.3	163.7	163.9	164.3	164.6	165.1	165.7	166.2	166.7
Owners' equivalent rent (12/84 = 100)	156.2	161.2	162.2	162.7	163.1	163.4	163.7	164.0	164.3	164.6	164.9	165.4	166.0	166.5	167.0
Household insurance (12/84 = 100)	144.6	147.1	148.0	148.7	150.0	147.2	147.4	148.5	148.1	148.5	149.1	149.8	150.3	150.9	151.2
Maintenance and repairs	134.5	137.6	138.0	138.5	139.9	140.1	140.0	140.7	140.9	141.0	141.7	141.7	143.6	143.8	141.1
Maintenance and repair services	142.7	147.6	149.4	149.5	149.9	150.1	150.0	150.3	150.3	150.9	151.9	152.0	155.9	156.5	152.2
Maintenance and repair commodities	123.6	124.9	123.6	124.8	127.1	127.1	127.3	128.3	128.7	128.2	128.6	128.6	128.3	128.0	127.2
Fuel and other utilities	123.2	127.2	129.5	128.3	128.1	129.0	130.5	130.7	129.6	128.6	128.7	131.7	131.9	131.2	131.9
Fuels	110.8	114.7	117.9	115.6	115.1	116.5	118.5	118.5	116.5	114.7	114.7	119.2	119.1	118.1	119.3
Fuel oil, coal, and bottled gas	88.0	99.0	95.4	102.6	105.7	110.6	111.6	109.4	105.3	101.7	100.0	97.6	94.5	93.2	93.4
Gas (piped) and electricity	118.4	121.6	125.7	122.2	121.2	122.3	124.5	124.8	122.9	121.2	121.5	127.0	127.3	126.2	127.6
Other utilities and public services	153.2	157.7	158.8	159.2	159.5	159.6	160.3	160.9	161.2	161.5	161.8	162.5	163.2	162.9	163.1
Household furnishings and operations	121.8	123.2	123.6	123.4	123.3	123.5	123.4	123.7	123.9	124.0	124.3	124.2	124.1	123.7	123.9
Housefurnishings	109.9	109.9	110.1	109.7	109.5	109.8	109.5	109.8	109.8	109.7	110.2	110.0	109.5	109.1	109.1
Housekeeping supplies	137.3	141.5	141.8	142.1	142.4	142.0	142.8	143.1	143.5	143.9	143.7	143.4	144.4	143.4	143.7
Housekeeping services	146.8	150.9	152.2	152.5	152.4	152.9	152.6	152.9	153.3	153.7	153.9	154.4	154.7	155.2	156.1

27. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Apparel and upkeep	130.9	130.9	130.6	132.4	132.4	129.3	128.7	131.1	133.8	135.5	134.7	131.8	129.8	129.4	132.1
Apparel commodities	127.7	127.6	127.2	129.2	129.1	125.7	125.1	127.6	130.5	132.3	131.5	128.3	126.1	125.7	128.6
Men's and boys' apparel	125.9	127.4	127.0	129.0	130.9	127.5	127.0	127.2	128.8	131.1	131.7	128.8	128.0	128.8	131.2
Women's and girls' apparel	125.4	123.6	122.2	125.4	125.0	121.7	119.9	124.8	129.2	130.7	129.0	124.8	120.6	119.6	124.6
Infants' and toddlers' apparel	128.1	130.8	132.4	128.9	127.7	128.1	128.5	128.1	130.7	134.9	134.9	133.8	132.0	128.4	128.3
Footwear	126.2	127.6	127.8	129.2	128.9	127.0	126.0	127.2	127.9	130.3	130.1	127.2	126.8	127.3	128.3
Other apparel commodities	150.6	149.6	151.4	151.9	148.7	139.7	144.6	145.7	149.5	149.3	146.8	146.3	146.8	145.7	144.8
Apparel services	156.8	159.0	159.7	159.7	160.0	160.5	160.8	161.3	161.5	161.7	161.9	162.2	162.6	162.7	162.8
Transportation	138.8	142.8	142.9	143.5	144.5	144.8	144.6	144.4	144.2	144.2	143.8	143.4	142.9	143.3	143.6
Private transportation	136.9	140.7	140.7	141.2	142.2	142.4	142.4	142.4	141.9	141.8	141.5	141.1	140.4	141.1	141.4
New vehicles	141.8	144.7	144.3	145.0	146.0	146.5	146.6	146.7	146.6	146.4	145.9	145.4	144.9	144.3	144.0
New cars	138.7	141.1	140.6	141.1	141.9	142.7	142.7	142.5	142.5	142.3	141.8	141.3	140.7	140.0	139.7
Used cars	157.3	158.2	158.2	158.3	157.7	156.8	155.9	155.7	155.7	155.7	155.3	153.3	151.4	149.9	149.7
Motor fuel	99.9	106.3	106.2	106.0	108.1	108.9	108.8	108.2	106.3	105.9	105.7	105.9	104.0	107.7	109.2
Gasoline	99.7	105.9	105.8	105.3	107.4	108.3	108.2	107.5	105.7	105.4	105.2	105.5	103.6	107.6	109.2
Maintenance and repair	154.8	159.3	160.8	161.4	161.4	161.4	162.0	162.1	162.5	162.9	163.2	163.7	164.0	164.2	164.5
Other private transportation	166.5	169.6	169.8	171.2	171.9	171.6	171.9	172.6	172.8	172.8	172.5	172.1	172.8	172.7	172.3
Other private transportation commodities	104.0	104.2	104.1	104.1	104.2	104.3	104.2	104.3	104.1	103.7	103.8	103.8	104.4	104.0	103.8
Other private transportation services	182.2	186.1	186.4	188.2	189.1	188.6	189.0	190.0	190.2	190.3	189.9	189.4	190.2	190.1	189.7
Public transportation	171.9	179.6	181.8	184.3	184.5	186.9	183.6	180.3	185.1	186.8	185.2	184.0	186.2	181.6	183.5
Medical care	219.8	227.6	228.8	229.4	229.9	230.1	231.1	232.1	232.8	233.2	233.6	233.8	234.2	234.6	234.7
Medical care commodities	202.2	207.8	208.5	209.8	209.1	209.4	210.1	211.4	212.1	212.3	212.9	213.4	213.3	212.5	212.5
Medical care services	223.8	232.1	233.3	233.9	234.6	234.7	235.9	236.8	237.4	237.9	238.2	238.4	238.9	239.5	239.7
Professional services	202.0	209.5	210.8	211.4	212.1	212.3	213.3	214.3	215.4	216.0	216.5	216.8	217.2	217.7	217.8
Hospital and related services	255.2	266.5	268.4	269.1	269.9	270.4	271.9	272.8	273.0	273.4	273.6	273.6	274.4	275.2	275.6
Entertainment	151.8	156.8	157.4	157.8	158.3	158.4	158.8	159.2	159.6	159.7	159.7	160.1	160.1	160.6	160.5
Entertainment commodities	137.9	142.0	142.2	142.5	142.8	142.9	142.9	143.1	143.4	143.0	142.8	142.7	142.7	143.5	143.4
Entertainment services	171.9	178.2	179.3	179.7	180.4	180.7	181.4	182.2	182.8	183.6	183.8	185.0	184.8	184.9	184.8
Other goods and services	204.2	212.2	214.7	215.3	215.8	215.2	216.7	217.4	218.0	219.8	220.2	219.9	220.3	222.1	224.6
Tobacco products	225.9	232.5	233.7	234.8	235.8	233.9	236.1	237.0	237.7	242.7	243.4	240.9	241.7	243.0	246.1
Personal care	147.3	150.1	150.8	150.9	151.3	150.4	151.6	151.4	151.6	152.6	152.6	152.7	152.4	152.4	152.6
Toilet goods and personal care appliances	143.8	145.0	145.7	145.4	145.4	143.5	144.4	144.2	144.3	145.4	145.0	145.0	144.6	144.4	144.7
Personal care services	151.5	156.6	157.2	158.0	158.7	159.4	160.8	160.8	161.2	162.1	162.4	162.7	162.6	162.8	163.0
Personal and educational expenses	231.2	242.9	247.3	247.7	248.1	248.3	249.7	250.8	251.6	251.8	252.5	253.1	253.6	256.8	260.2
School books and supplies	215.5	228.2	231.5	232.4	232.6	232.9	236.2	236.9	237.1	237.4	237.5	239.6	240.1	241.9	243.9
Personal and educational services	232.6	244.4	248.8	249.2	249.7	249.8	251.1	252.3	253.0	253.3	254.0	254.5	255.0	258.3	261.8
All items	149.8	154.1	155.1	155.5	155.9	155.9	156.3	156.8	157.0	157.2	157.2	157.4	157.5	157.8	158.3
Commodities	136.4	139.9	140.4	141.0	141.6	141.4	141.5	141.8	142.0	142.2	142.1	141.5	141.0	141.4	142.1
Food and beverages	148.3	153.2	154.5	155.2	155.7	156.1	156.4	156.4	156.5	156.5	156.6	156.6	157.0	157.6	157.8
Commodities less food and beverages	129.0	131.8	131.7	132.3	132.9	132.4	132.4	132.9	133.1	133.4	133.2	132.3	131.3	131.6	132.5
Nondurables less food and beverages	129.0	132.8	132.8	133.8	134.6	133.6	133.7	134.5	134.8	135.6	135.3	134.1	132.9	133.9	135.5
Apparel commodities	127.7	127.6	127.2	129.2	129.1	125.7	125.1	127.6	130.5	132.3	131.5	128.3	126.1	125.7	128.6
Nondurables less food, beverages, and apparel	132.6	138.3	138.4	139.0	140.2	140.4	140.9	140.8	139.9	140.3	140.2	139.9	139.1	140.8	141.9
Durables	127.9	129.2	129.2	129.2	129.5	129.6	129.5	129.5	129.6	129.3	129.2	128.6	128.0	127.4	127.2
Services	166.0	171.4	172.8	173.0	173.2	173.4	174.2	174.9	175.2	175.3	175.5	176.4	177.1	177.4	177.7
Rent of shelter (12/84 = 100)	155.0	159.9	160.9	161.3	161.3	161.4	162.3	163.0	163.5	163.7	163.9	164.5	165.3	165.8	165.8
Household services less rent of shelter (12/84 = 100)	127.0	130.5	133.0	131.5	131.2	131.7	132.9	133.3	132.6	132.0	132.3	135.1	135.5	135.0	135.8
Transportation services	173.6	178.3	179.2	180.8	181.3	181.5	181.3	181.3	182.3	182.8	182.4	182.0	182.9	182.1	182.3
Medical care services	223.8	232.1	233.3	233.9	234.6	234.7	235.9	236.8	237.4	237.9	238.2	238.4	238.9	239.5	239.7
Other services	190.1	198.1	200.5	200.9	201.5	201.7	202.7	203.5	204.1	204.6	205.0	205.7	205.9	207.4	209.0
Special indexes:															
All items less food	150.0	154.3	155.2	155.5	155.8	155.8	156.3	156.8	157.1	157.3	157.3	157.5	157.5	157.8	158.4
All items less shelter	146.8	151.0	151.9	152.4	152.8	152.8	153.2	153.5	153.7	153.8	153.8	153.8	153.6	153.9	154.6
All items less homeowners' costs (12/84 = 100)	140.7	144.8	145.7	146.1	146.4	146.4	146.8	147.3	147.5	147.6	147.6	147.7	147.6	147.9	148.4
All items less medical care	146.4	150.7	151.6	152.0	152.3	152.4	152.8	153.2	153.5	153.6	153.6	153.8	153.8	154.2	154.7
Commodities less food	130.0	132.8	132.8	133.4	134.0	133.5	133.5	134.0	134.2	134.6	134.4	133.5	132.5	132.9	133.7
Nondurables less food	130.4	134.3	134.3	135.3	136.0	135.2	135.3	136.0	136.4	137.1	136.9	135.8	134.7	135.6	137.1
Nondurables less food and apparel	133.7	139.3	139.5	140.0	141.1	141.3	141.8	141.8	141.1	141.4	141.4	141.1	140.4	141.9	142.9
Nondurables	139.0	143.3	143.9	144.8	145.4	145.2	145.4	145.7	146.0	146.4	146.2	145.7	145.3	146.0	147.0
Services less rent of shelter (12/84 = 100)	157.6	162.7	164.5	164.4	164.7	165.0	165.7	166.2	166.3	166.4	166.5	167.7	168.2	168.2	168.8
Services less medical care	161.1	166.2	167.6	167.8	167.9	168.1	169.0	169.6	169.9	170.0	170.1	171.1	171.8	172.0	172.4
Energy	104.7	109.8	111.3	110.1	110.9	112.0	113.0	112.7	110.7	109.6	109.5	111.8	110.8	112.2	113.5
All items less energy	156.1	160.4	161.2	161.9	162.2	162.1	162.5	163.0	163.5	163.9	163.9	163.8	164.0	164.2	164.6
All items less food and energy	158.2	162.3	163.1	163.7	163.9	163.7	164.1	164.8	165.5	165.9	165.9	165.8	165.9	166.0	166.5
Commodities less food and energy	138.9	140.9	141.0	141.6	141.8	141.0	141.0	141.7	142.5	143.1	142.9	141.8	141.1	140.8	141.5
Energy commodities	99.1	105.9	105.5	106.0	108.2	109.4	109.4	108.6	106.5	105.8	105.5	105.5	103.4	106.7	108.1
Services less energy	171.3	176.8	178.0	178.6	178.9	179.0	179.8	180.4	181.0	181.3	181.4	181.9	182.6	183.0	183.3
Purchasing power of the consumer dollar:															
1982–84 = $1.00	.668	.649	.645	.643	.642	.641	.640	.638	.637	.636	.636	.635	.635	.634	.632
1967 = $1.00	.224	.218	.216	.216	.215	.215	.215	.214	.214	.214	.214	.213	.213	.213	.212

28. Consumer Price Index: U.S. city average and available local area data: all items

[1982–84 = 100, unless otherwise indicated]

Area[1]	Pricing schedule[2]	All Urban Consumers							Urban Wage Earners						
		1996		1997					1996		1997				
		Aug.	Sept.	May	June	July	Aug.	Sept.	Aug.	Sept.	May	June	July	Aug.	Sept.
	M	157.3	157.8	160.1	160.3	160.5	160.8	161.2	154.5	155.1	157.2	157.4	157.5	157.8	158.3
Region and area size[3]															
Northeast urban	M	164.0	164.6	166.8	167.0	167.6	167.8	168.4	161.4	162.0	164.1	164.3	164.7	164.9	165.6
Size A—More than 1,200,000	M	164.7	165.4	167.5	167.7	168.2	168.4	169.2	161.0	161.8	163.8	164.0	164.3	164.5	165.4
Size B—500,000 to 1,200,000	M	162.2	162.2	164.7	165.2	165.9	166.2	166.0	160.0	159.8	162.3	162.8	163.5	163.7	163.4
Size C—50,000 to 500,000	M	161.8	162.2	165.2	165.6	166.4	166.8	167.1	163.2	163.7	166.9	167.1	167.5	167.8	168.6
North Central urban	M	153.4	154.0	156.3	156.7	156.6	157.2	157.5	149.9	150.6	152.8	153.1	153.1	153.6	153.9
Size A—More than 1,200,000	M	154.0	154.5	157.0	157.3	157.3	158.0	158.3	149.9	150.4	152.7	152.9	152.9	153.6	153.9
Size B—360,000 to 1,200,000	M	152.8	153.3	155.4	155.7	155.8	156.3	156.2	148.7	149.5	151.5	151.7	151.9	152.3	152.3
Size C—50,000 to 360,000	M	154.7	155.4	158.3	158.7	158.5	158.8	159.6	151.9	152.6	155.6	156.0	155.7	156.1	156.9
Size D—Nonmetropolitan (less than 50,000)	M	150.4	151.0	152.2	152.6	152.6	152.6	153.4	148.5	149.1	150.2	150.8	150.7	150.9	151.5
South urban	M	154.1	154.5	156.6	157.0	157.0	157.1	157.5	152.7	153.1	155.1	155.4	155.3	155.5	155.9
Size A—More than 1,200,000	M	153.1	153.5	155.5	155.8	155.8	155.9	156.4	151.4	151.7	153.6	153.9	153.9	154.0	154.5
Size B—450,000 to 1,200,000	M	156.9	157.3	159.7	160.4	160.5	160.8	160.6	153.1	153.6	155.7	156.1	156.2	156.5	156.6
Size C—50,000 to 450,000	M	154.0	154.4	156.1	156.4	156.0	156.1	156.7	153.9	154.4	156.0	156.2	155.7	155.9	156.4
Size D—Nonmetropolitan (less than 50,000)	M	152.6	153.2	156.0	156.3	156.4	156.4	157.1	153.1	153.9	156.3	156.5	156.6	157.0	157.7
West urban	M	158.0	158.6	161.1	161.0	161.1	161.5	162.1	154.9	155.5	157.8	157.5	157.6	158.0	158.6
Size A—More than 1,250,000	M	158.1	158.7	161.1	161.1	161.3	161.7	162.3	153.4	154.0	156.1	156.0	156.2	156.5	157.2
Size C—50,000 to 330,000	M	162.6	163.0	166.5	166.0	166.1	166.8	167.4	159.5	159.9	163.2	162.7	162.9	163.5	164.1
Size classes:															
A (12/86 = 100)	M	141.9	142.4	144.5	144.6	144.8	145.1	145.6	140.9	141.4	143.3	143.5	143.6	143.9	144.4
B	M	157.6	157.9	160.4	160.7	160.9	161.2	161.2	154.6	155.0	157.3	157.6	157.8	158.0	158.0
C	M	157.0	157.4	160.0	160.2	160.1	160.5	161.0	156.0	156.6	159.1	159.2	159.1	159.4	160.0
D	M	154.0	154.7	156.4	156.6	156.7	156.8	157.4	153.3	154.0	155.6	155.7	155.8	156.0	156.6
Selected local areas															
Chicago, IL–Northwestern IN	M	158.1	158.3	161.1	161.7	161.7	162.5	162.1	152.9	153.2	155.5	156.0	156.0	156.7	156.4
Los Angeles–Long Beach, Anaheim, CA	M	157.3	158.2	159.5	159.4	159.5	159.7	160.5	151.9	152.7	154.0	153.8	153.8	154.0	154.7
New York, NY–Northeastern NJ	M	167.2	168.2	169.9	170.3	170.8	170.8	171.7	163.3	164.4	166.0	166.2	166.6	166.7	167.7
Philadelphia, PA–NJ	M	163.6	164.5	166.0	166.1	166.4	166.8	168.6	163.0	163.7	165.2	165.3	165.5	165.9	167.9
San Francisco–Oakland, CA	M	155.6	156.3	159.8	160.0	160.6	161.2	161.6	153.0	153.8	156.8	157.0	157.5	158.1	158.6
Baltimore, MD	1	–	155.4	155.5	–	156.9	–	156.7	–	154.4	154.3	–	155.6	–	155.6
Boston, MA	1	–	163.5	166.7	–	167.1	–	167.8	–	162.1	165.6	–	165.8	–	166.2
Cleveland, OH	1	–	153.5	155.6	–	156.3	–	157.3	–	145.8	147.8	–	148.2	–	149.2
Miami, FL	1	–	154.6	157.9	–	157.9	–	158.5	–	152.6	155.6	–	155.5	–	156.1
St. Louis, MO–IL	1	–	151.0	152.1	–	153.3	–	155.1	–	150.1	151.2	–	152.5	–	154.0
Washington, DC–MD–VA	1	–	160.8	162.1	–	162.9	–	163.6	–	158.2	159.7	–	160.2	–	161.1
Dallas–Ft Worth, TX	2	149.5	–	–	151.4	–	151.2	–	149.5	–	–	151.4	–	151.1	–
Detroit, MI	2	152.7	–	–	155.0	–	156.9	–	148.0	–	–	149.8	–	151.6	–
Houston, TX	2	142.8	–	–	144.8	–	145.4	–	142.2	–	–	144.1	–	144.9	–
Pittsburgh, PA	2	153.6	–	–	157.4	–	157.5	–	147.2	–	–	150.8	–	151.0	–

[1] Area definitions are those established by the Office of Management and Budget in 1983, except for Boston–Lawrence–Salem, MA–NH, Area (excludes Monroe County); and Milwaukee, WI, Area (includes only the Milwaukee MSA). Definitions do not include revisions made since 1983. Excludes farms and the military.

[2] Foods, fuels, and several other items priced every month in all areas; most other goods and services priced as indicated:

M—Every month.

1—January, March, May, July, September, and November.

2—February, April, June, August, October, and December.

[3] Regions are defined as the four Census regions.

– Data not available.

NOTE: Local area CPI indexes are byproducts of the national CPI program. Because each local index is a small subset of the national index, it has a smaller sample size and is, therefore, subject to substantially more sampling and other measurement error than the national index. As a result, local area indexes show greater volatility than the national index, although their long-term trends are quite similar. Therefore, the Bureau of Labor Statistics strongly urges users to consider adopting the national average CPI for use in escalator clauses.

29. Annual data: Consumer Price Index, U.S. city average, all items and major groups

[1982–84 = 100]

Series	1988	1989	1990	1991	1992	1993	1994	1995	1996
Consumer Price Index for All Urban Consumers:									
All items:									
Index	118.3	124.0	130.7	136.2	140.3	144.5	148.2	152.4	156.9
Percent change	4.1	4.8	5.4	4.2	3.0	3.0	2.6	2.8	3.0
Food and beverages:									
Index	118.2	124.9	132.1	136.8	138.7	141.6	144.9	148.9	153.7
Percent change	4.1	5.7	5.8	3.6	1.4	2.1	2.3	2.8	3.2
Housing:									
Index	118.5	123.0	128.5	133.6	137.5	141.2	144.8	148.5	152.8
Percent change	3.8	3.8	4.5	4.0	2.9	2.7	2.5	2.6	2.9
Apparel and upkeep:									
Index	115.4	118.6	124.1	128.7	131.9	133.7	133.4	132.0	131.7
Percent change	4.3	2.8	4.6	3.7	2.5	1.4	–.2	–1.0	–0.2
Transportation:									
Index	108.7	114.1	120.5	123.8	126.5	130.4	134.3	139.1	143.0
Percent change	3.1	5.0	5.6	2.7	2.2	3.1	3.0	3.6	2.8
Medical care:									
Index	138.6	149.3	162.8	177.0	190.1	201.4	211.0	220.5	228.2
Percent change	6.5	7.7	9.0	8.7	7.4	5.9	4.8	4.5	3.5
Entertainment:									
Index	120.3	126.5	132.4	138.4	142.3	145.8	150.1	153.9	159.1
Percent change	4.3	5.2	4.7	4.5	2.8	2.5	2.9	2.5	3.4
Other goods and services:									
Index	137.0	147.7	159.0	171.6	183.3	192.9	198.5	206.9	215.4
Percent change	6.6	7.8	7.7	7.9	6.8	5.2	2.9	4.2	4.1
Consumer Price Index for Urban Wage Earners and Clerical Workers:									
All items:									
Index	117.0	122.6	129.0	134.3	138.2	142.1	145.6	149.8	154.1
Percent change	4.0	4.8	5.2	4.1	2.9	2.8	2.5	2.9	2.9

30. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		1996				1997								
	1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Finished goods	127.9	131.3	131.8	132.7	132.6	132.7	132.6	132.2	132.1	131.6	131.6	131.6	131.3	131.7	131.8
Finished consumer goods	125.6	129.5	130.4	131.2	131.1	131.2	131.0	130.6	130.4	129.8	130.0	130.1	129.7	130.2	130.5
Finished consumer foods	129.0	133.5	135.6	136.6	136.1	135.5	134.1	133.8	135.2	134.3	135.2	134.0	134.0	134.8	134.8
Finished consumer goods excluding foods	124.0	127.6	128.0	128.8	128.8	129.2	129.5	129.0	128.2	127.7	127.6	128.2	127.7	128.1	128.5
Nondurable goods less food	118.8	123.2	124.6	124.5	124.5	125.2	125.7	124.9	123.8	123.2	123.5	124.4	124.1	124.6	125.7
Durable goods	132.7	134.2	132.4	135.2	135.2	135.0	134.9	135.0	135.0	134.5	133.6	133.5	132.5	132.6	131.5
Capital equipment	136.7	138.3	137.3	138.9	138.7	138.7	139.0	138.9	138.8	138.6	138.1	138.1	137.9	137.7	137.1
Intermediate materials, supplies, and components	124.9	125.7	126.7	126.0	125.7	126.0	126.3	126.1	125.6	125.3	125.4	125.7	125.5	125.6	126.0
Materials and components for manufacturing	130.4	128.6	128.6	128.3	128.0	128.2	128.4	128.4	128.6	128.4	128.4	128.3	128.3	128.3	128.4
Materials for food manufacturing	119.5	125.7	129.2	129.2	124.8	123.8	122.9	122.9	124.1	123.8	123.9	122.8	122.3	122.8	123.2
Materials for nondurable manufacturing	135.1	130.5	130.0	129.6	129.5	129.8	130.1	129.9	129.4	129.0	129.1	129.1	129.4	129.6	130.2
Materials for durable manufacturing	135.6	131.4	131.2	130.5	130.8	131.4	131.9	132.6	133.4	133.4	133.4	133.8	133.1	133.1	133.1
Components for manufacturing	126.5	126.8	126.8	126.6	126.6	126.7	126.8	126.8	126.7	126.6	126.5	126.4	126.5	126.2	126.0
Materials and components for construction	142.1	143.5	144.8	144.3	144.9	144.7	145.0	145.7	146.2	146.8	147.2	147.1	147.1	147.0	146.7
Processed fuels and lubricants	84.2	89.9	93.6	92.3	91.3	92.7	93.4	92.1	88.7	87.0	87.2	89.6	88.5	89.2	90.9
Containers	148.8	141.2	138.5	137.9	137.5	137.9	137.8	136.9	136.0	135.1	134.6	134.2	133.9	134.0	135.4
Supplies	132.1	135.9	136.8	135.9	135.4	135.5	135.5	135.5	135.8	136.0	136.2	135.9	135.9	135.7	136.1
Crude materials for further processing	102.7	113.5	112.9	111.3	114.8	121.6	126.3	116.1	107.6	107.9	110.4	107.2	107.2	107.8	108.2
Foodstuffs and feedstuffs	105.8	121.5	124.9	119.6	117.7	113.6	112.2	111.0	114.1	116.7	117.4	111.5	112.1	111.7	111.1
Crude nonfood materials	96.8	104.0	100.8	101.8	108.7	122.5	131.0	115.2	99.4	98.1	101.8	100.5	100.0	101.2	102.4
Special groupings:															
Finished goods, excluding foods	127.5	130.5	130.5	131.5	131.5	131.7	132.1	131.7	131.1	130.7	130.5	130.9	130.4	130.7	130.8
Finished energy goods	78.1	83.1	85.3	84.8	84.9	85.7	86.5	85.2	83.0	81.8	82.2	83.6	83.0	84.0	85.2
Finished goods less energy	136.9	139.6	139.6	141.0	140.7	140.6	140.3	140.2	140.7	140.3	140.3	139.9	139.7	139.9	139.7
Finished consumer goods less energy	136.9	140.1	140.5	141.8	141.5	141.4	140.8	140.7	141.4	141.0	141.1	140.6	140.4	140.7	140.6
Finished goods less food and energy	140.0	142.0	141.1	142.7	142.5	142.6	142.8	142.7	142.8	142.7	142.3	142.3	141.9	141.9	141.6
Finished consumer goods less food and energy	141.9	144.3	143.5	145.0	144.9	145.1	145.1	145.1	145.3	145.2	144.9	144.9	144.5	144.5	144.4
Consumer nondurable goods less food and energy	148.5	151.4	151.5	152.0	151.8	152.2	152.4	152.3	152.7	153.0	153.0	153.2	153.2	153.2	153.9
Intermediate materials less foods and feeds	125.5	125.6	126.3	125.8	125.7	126.1	126.4	126.2	125.6	125.2	125.3	125.7	125.5	125.6	126.0
Intermediate foods and feeds	114.8	128.4	133.5	130.7	126.2	125.6	124.6	124.8	127.2	127.5	128.3	126.5	125.2	124.6	126.2
Intermediate energy goods	84.1	89.7	93.3	92.1	91.0	92.4	93.2	91.8	88.5	86.7	87.0	89.3	88.2	88.9	90.6
Intermediate goods less energy	134.0	133.6	133.9	133.5	133.2	133.4	133.5	133.6	133.8	133.8	133.9	133.7	133.7	133.6	133.8
Intermediate materials less foods and energy	135.2	134.0	133.9	133.6	133.7	133.9	134.1	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.3
Crude energy materials	69.4	84.4	81.0	82.7	91.9	109.6	119.4	98.0	77.1	76.4	80.8	79.0	78.7	80.0	82.1
Crude materials less energy	123.5	130.0	131.7	127.6	126.1	123.4	123.5	123.3	125.7	126.7	127.5	123.4	123.5	123.5	122.6
Crude nonfood materials less energy	173.6	155.8	153.5	152.3	151.7	152.5	156.6	158.9	159.6	156.4	157.8	158.1	157.0	157.9	156.1

31. Producer Price Indexes for the net

[December 1984 = 100, unless otherwise indicated]

SI	Industry	Annual average		1996				1997								
		1995	1996	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
–	**Total mining industries**	71.0	84.4	81.3	83.0	90.4	104.2	111.3	95.1	78.8	77.6	80.8	79.7	79.5	80.4	82.0
10	Metal mining	101.4	92.1	86.8	86.6	88.4	87.3	89.9	88.5	90.9	87.7	89.7	90.9	86.5	86.5	83.7
12	Coal mining (12/85 = 100)	91.6	91.4	90.9	90.5	91.3	90.7	92.9	91.3	92.8	95.0	91.7	93.1	90.5	91.4	91.6
13	Oil and gas extraction (12/85 = 100)	66.6	84.8	81.3	83.7	93.4	112.1	121.1	99.6	77.3	75.5	80.2	78.5	78.9	80.0	82.3
14	Mining and quarrying of nonmetallic minerals, except fuels	123.8	127.1	127.5	127.3	127.3	127.1	127.6	127.7	127.7	128.1	128.3	128.8	129.1	129.3	129.2
–	**Total manufacturing industries**	124.2	127.1	127.5	128.2	128.0	128.0	128.1	127.9	127.8	127.7	127.6	127.3	127.0	127.3	127.3
20	Food and kindred products	121.7	127.1	129.7	129.8	128.5	128.2	127.4	127.1	128.1	128.3	128.9	128.4	128.0	128.6	128.3
21	Tobacco manufactures	193.2	199.1	201.0	201.1	201.1	201.2	201.4	201.2	203.3	208.4	209.2	209.8	209.4	209.4	218.6
22	Textile mill products	116.5	118.2	118.5	118.6	118.6	118.6	118.6	118.8	118.8	118.2	118.5	118.9	118.4	118.9	118.9
23	Apparel and other finished products made from fabrics and similar materials	120.6	122.3	123.0	123.1	122.9	123.1	122.9	122.9	123.2	122.9	123.3	123.1	123.4	123.4	123.5
24	Lumber and wood products, except furniture	154.1	153.5	156.6	154.6	156.2	155.9	156.4	158.2	159.3	159.9	160.7	159.8	160.1	159.4	158.8
25	Furniture and fixtures	133.3	136.2	136.4	137.1	137.3	137.4	137.5	137.6	137.7	138.0	138.2	137.9	138.3	138.3	138.6
26	Paper and allied products	146.7	138.6	135.1	134.9	134.6	134.7	134.5	133.5	132.5	131.5	131.5	131.7	131.8	132.5	134.2
27	Printing, publishing, and allied industries	159.0	165.6	166.1	166.4	166.7	166.9	168.0	168.1	168.0	168.5	168.2	168.3	168.6	168.8	169.1
28	Chemicals and allied products	143.4	145.8	146.8	146.8	146.3	146.4	146.8	146.8	146.9	147.0	147.0	146.9	147.3	147.0	147.0
29	Petroleum refining and related products	77.2	87.4	89.9	92.0	92.5	92.5	92.9	91.2	87.3	85.8	85.5	83.7	81.5	84.9	86.1
30	Rubber and miscellaneous plastics products	123.3	123.1	123.5	123.1	123.3	123.3	122.9	122.8	122.4	122.8	122.9	122.7	122.9	123.0	122.9
31	Leather and leather products	134.1	134.7	135.3	135.1	135.2	136.0	136.8	137.3	137.2	137.4	136.9	136.9	136.9	137.0	137.5
32	Stone, clay, glass, and concrete products	124.3	125.8	126.3	126.2	126.6	126.5	126.8	126.9	127.1	127.5	127.6	127.6	127.5	127.4	127.3
33	Primary metal industries	128.2	123.7	122.7	122.7	122.6	123.0	123.6	124.0	124.8	125.0	125.0	125.5	125.0	125.1	125.2
34	Fabricated metal products, except machinery and transportation transportation equipment	124.8	126.2	126.4	126.5	126.5	126.6	126.8	127.0	127.1	127.2	127.4	127.5	127.7	127.9	127.9
35	Machinery, except electrical	119.0	119.2	119.1	118.9	118.9	118.7	119.1	119.0	119.1	119.1	118.5	118.6	118.1	118.1	118.1
36	Electrical and electronic machinery, equipment, and supplies	113.3	113.2	113.0	112.7	112.8	112.7	112.5	112.2	112.2	112.0	111.8	112.0	111.7	111.1	111.2
37	Transportation	132.2	134.2	132.1	135.4	135.2	135.1	135.4	135.4	135.3	134.8	133.9	133.8	133.0	132.8	131.7
38	Measuring and controlling instruments; photographic, medical, and optical goods; watches and clocks	124.0	125.0	125.0	125.1	124.7	125.2	125.5	125.4	125.5	125.7	125.7	125.2	125.8	126.0	126.0
39	Miscellaneous manufacturing industries (12/85 = 100)	125.9	127.8	128.1	128.3	128.3	128.3	128.6	128.7	128.9	129.1	129.1	128.9	129.0	129.3	129.3
	Service industries:															
42	Motor freight transportation and warehousing (06/93 = 100)	104.5	106.3	106.6	106.9	107.1	107.2	108.0	108.5	108.6	108.8	108.8	109.0	109.2	109.3	109.3
43	U.S. Postal Service (06/89 = 100)	132.2	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3
44	Water transportation (12/92 = 100)	103.0	103.7	103.8	104.6	104.5	104.2	104.1	104.2	104.1	104.2	104.3	104.5	105.9	104.8	104.3
45	Transportation by air (12/92 = 100)	113.7	121.1	121.9	122.4	123.5	122.7	128.8	128.9	124.6	125.1	125.1	126.4	126.3	126.1	123.3
46	Pipelines, except natural gas (12/92 = 100)	110.8	104.6	101.0	100.9	100.9	100.9	98.8	98.8	98.8	98.8	98.9	98.9	98.7	98.7	98.7

32. Annual data: Producer Price Indexes, by stage of processing

[1982 = 100]

Index	1988	1989	1990	1991	1992	1993	1994	1995	1996
Finished goods									
Total	108.0	113.6	119.2	121.7	123.2	124.7	125.5	127.9	131.3
Foods	112.6	118.7	124.4	124.1	123.3	125.7	126.8	129.0	133.6
Energy	59.8	65.7	75.0	78.1	77.8	78.0	77.0	78.1	83.2
Other	117.0	122.1	126.6	131.1	134.2	135.8	137.1	140.0	142.0
Intermediate materials, supplies, and components									
Total	107.1	112.0	114.5	114.4	114.7	116.2	118.5	124.9	125.7
Foods	106.0	112.7	117.9	115.3	113.9	115.6	118.5	119.5	125.3
Energy	70.9	76.1	85.5	85.1	84.3	84.6	83.0	84.1	89.8
Other	115.2	120.2	120.9	121.4	122.0	123.8	127.1	135.2	134.0
Crude materials for further processing									
Total	96.0	103.1	108.9	101.2	100.4	102.4	101.8	102.7	113.8
Foods	106.1	111.2	113.1	105.5	105.1	108.4	106.5	105.8	121.5
Energy	67.7	75.9	85.9	80.4	78.8	76.7	72.1	69.4	85.0
Other	85.9	95.8	107.3	97.5	94.2	94.1	97.0	105.8	105.7

33. U.S. export price indexes by Standard International Trade Classification

[1995 = 100, unless otherwise indicated]

SITC Rev. 3	Industry	1996				1997								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
0	**Food and live animals**	107.3	105.6	103.2	101.9	100.7	102.3	103.4	103.1	101.2	98.5	97.7	99.7	99.5
01	Meat and meat preparations	98.5	98.9	98.3	97.8	95.4	94.5	96.4	96.7	95.7	95.3	95.7	96.2	95.2
04	Cereals and cereal preparations	109.3	104.6	101.5	100.5	98.7	102.8	104.9	104.5	99.7	92.3	89.9	93.2	95.0
05	Vegetables, fruit, and nuts, prepared fresh or dry	106.8	109.0	106.2	101.0	101.4	101.9	101.2	100.1	100.7	101.6	104.0	103.4	97.7
2	**Crude materials, inedible, except fuels**	90.8	89.5	88.7	88.7	90.0	92.2	93.2	92.6	93.0	93.4	93.6	92.8	91.8
21	Hides, skins, and furskins, raw	109.4	117.5	116.4	113.7	113.4	114.7	115.6	113.8	110.0	100.8	96.0	98.3	100.1
22	Oilseeds and oleaginous fruits	131.7	113.9	115.6	114.9	120.1	126.7	133.1	134.0	136.1	134.6	128.6	120.5	120.1
24	Cork and wood	96.3	96.7	97.1	97.6	97.9	98.3	96.0	94.2	94.2	93.2	92.8	92.9	91.7
25	Pulp and waste paper	58.1	58.9	58.0	55.9	55.9	59.4	58.6	58.9	60.5	65.9	69.1	71.4	68.2
26	Textile fibers and their waste	86.7	85.5	82.6	83.5	83.3	83.2	85.2	83.5	83.3	83.4	84.2	84.4	83.8
27	Crude fertilizers and crude minerals	96.6	97.0	97.2	97.2	97.8	97.6	96.9	96.9	97.3	97.8	97.9	97.9	97.9
28	Metalliferous ores and metal scrap	85.6	86.5	84.0	85.7	86.9	88.8	89.7	89.4	89.6	91.7	96.0	96.6	94.9
3	**Mineral fuels, lubricants, and related products**	112.5	116.4	115.7	116.8	116.5	112.3	111.4	110.7	110.7	110.9	110.9	111.2	111.6
32	Coal, coke, and briquettes	101.5	101.5	101.7	101.8	102.6	102.2	102.2	102.5	102.4	102.0	101.7	101.7	101.6
33	Petroleum, petroleum products, and related materials	121.0	128.1	126.5	128.5	127.0	121.4	119.5	119.9	120.0	119.4	120.9	121.3	121.7
4	**Animal and vegetable oils, fats, and waxes**	101.7	97.3	90.0	93.0	96.1	97.6	96.5	93.4	93.6	94.7	93.3	93.3	94.9
5	**Chemicals and related products, n.e.s.**	96.3	96.4	95.9	96.1	96.2	96.4	96.8	96.6	96.7	96.5	96.4	95.6	95.4
54	Medicinal and pharmaceutical products	101.9	101.7	101.8	101.8	101.4	101.2	100.9	101.6	101.5	101.5	101.1	101.1	101.2
55	Essential oils; polishing and cleaning preparations	101.7	101.7	101.5	101.5	101.4	102.5	102.2	102.2	102.8	102.9	103.1	102.6	103.6
57	Plastics in primary forms (12/92 = 100)	96.1	95.6	93.1	93.8	94.8	95.8	97.8	97.8	97.6	97.1	95.9	94.2	93.4
58	Plastics in nonprimary forms (12/92 = 100)	98.0	97.7	97.3	97.4	99.1	98.4	98.7	98.5	99.3	99.1	99.0	99.0	98.9
59	Chemical materials and products, n.e.s.	102.8	103.0	103.1	103.1	103.0	103.1	103.5	104.0	104.2	103.9	103.9	104.0	103.6
6	**Manufactured goods classified chiefly by materials**	97.1	96.7	96.6	97.0	97.1	97.5	97.5	97.8	97.7	98.2	98.2	98.5	98.6
62	Rubber manufactures, n.e.s.	102.7	102.8	102.9	103.0	102.9	102.6	102.7	103.0	103.1	103.2	103.1	101.3	101.1
64	Paper, paperboard, and articles of paper, pulp, and paperboard	87.5	85.9	85.6	84.9	83.6	83.2	83.1	82.3	82.9	83.5	84.4	85.3	84.9
66	Nonmetallic mineral manufactures, n.e.s.	102.2	103.2	104.2	103.9	104.0	104.1	104.0	104.0	104.1	104.3	104.5	104.6	106.3
68	Nonferrous metals	88.7	87.2	85.2	88.3	89.9	92.4	91.7	92.0	91.7	93.4	92.6	93.7	93.7
7	**Machinery and transport equipment**	100.5	100.5	100.5	100.5	100.6	100.5	100.5	100.6	100.4	100.6	100.5	100.6	100.1
71	Power generating machinery and equipment	104.3	104.1	104.2	104.6	105.1	105.2	105.6	105.9	106.0	106.0	105.9	106.2	106.2
72	Machinery specialized for particular industries	103.1	103.1	102.8	102.9	103.7	103.8	103.7	103.8	104.3	104.2	104.1	104.4	104.4
74	General industrial machines and parts, n.e.s., and machine parts	102.7	103.0	103.3	103.1	103.4	103.8	104.1	104.6	104.7	105.2	105.0	105.3	105.2
75	Computer equipment and office machines	90.4	89.9	89.2	87.9	87.7	86.9	86.7	86.3	85.1	84.7	84.0	84.0	83.7
76	Telecommunications and sound recording and reproducing apparatus and equipment	100.2	100.3	100.4	100.7	100.8	100.2	99.9	99.9	99.6	99.6	99.6	99.6	99.2
77	Electrical machinery and equipment	97.9	97.5	97.4	97.5	97.0	96.9	96.7	96.9	96.8	96.5	96.5	96.5	94.9
78	Road vehicles	101.0	101.2	101.4	101.4	101.6	101.5	101.8	101.9	101.7	101.8	102.0	101.9	101.8
87	**Professional, scientific, and controlling instruments and apparatus**	101.9	101.9	102.2	102.7	103.4	103.7	103.8	103.1	103.3	103.4	103.5	103.5	103.3

34. U.S. import price indexes by Standard International Trade Classification

[1995 = 100, unless otherwise indicated]

SITC Rev. 3	Industry	1996				1997								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
0	**Food and live animals**	96.6	97.4	96.5	94.6	94.6	97.2	101.8	99.5	102.1	103.7	100.4	100.9	102.9
01	Meat and meat preparations	100.8	102.6	102.3	98.9	97.7	97.9	103.5	104.7	103.5	101.9	101.9	104.2	103.9
03	Fish and crustaceans, molluscs, and other aquatic invertebrates	97.0	97.0	97.1	98.2	98.4	100.1	99.7	100.4	102.1	103.6	104.4	104.6	104.5
05	Vegetables, fruit, and nuts, prepared fresh or dry	106.5	109.8	106.8	101.8	101.6	104.1	111.1	101.5	101.0	101.7	101.2	103.2	109.6
07	Coffee, tea, cocoa, spices, and manufactures thereof	78.9	77.4	77.2	75.0	77.7	85.8	98.6	98.1	107.8	118.4	99.5	97.6	100.0
1	**Beverages and tobacco**	104.9	104.9	105.0	105.2	105.6	106.7	106.9	107.2	107.0	107.5	107.7	107.7	107.8
11	Beverages	102.4	102.5	102.6	102.9	102.9	103.0	103.3	103.6	103.5	104.0	104.2	104.2	104.3
2	**Crude materials, inedible, except fuels**	97.0	95.4	96.4	96.3	97.0	102.1	99.0	97.6	99.8	97.4	97.4	96.9	95.4
23	Crude rubber (including synthetic and reclaimed)	85.6	83.5	85.5	88.2	87.4	88.1	88.3	84.8	82.1	83.9	78.3	77.7	72.1
24	Cork and wood	126.0	118.8	125.7	120.6	121.4	125.4	126.2	124.9	126.9	122.5	123.3	120.9	121.4
25	Pulp and waste paper	66.6	67.7	67.8	66.2	65.7	65.7	64.9	63.8	64.4	65.8	66.5	67.9	68.1
28	Metalliferous ores and metal scrap	97.4	97.2	95.9	97.5	99.8	102.6	103.0	106.0	105.6	105.8	104.8	105.0	104.5
29	Crude animal and vegetable materials, n.e.s.	–	–	–	100.0	105.3	148.2	105.2	94.3	118.1	97.3	102.1	101.8	95.3
3	**Mineral fuels, lubricants, and related products**	123.4	131.8	131.8	135.5	138.9	128.0	113.9	105.3	106.6	104.6	104.4	106.4	106.7
33	Petroleum, petroleum products, and related materials	124.3	132.9	131.6	133.9	134.6	123.8	113.1	104.8	106.4	104.0	103.0	105.3	105.4
34	Gas, natural and manufactured	115.7	123.5	136.5	157.5	184.4	170.7	125.9	113.7	112.0	113.3	119.8	119.7	121.3
5	**Chemicals and related products, n.e.s.**	99.0	99.1	99.1	99.1	98.6	97.9	97.8	96.6	96.5	96.4	96.2	96.4	96.1
52	Inorganic chemicals	100.4	103.4	102.1	103.5	103.2	102.7	101.5	101.1	100.8	99.0	97.9	98.6	99.4
53	Dying, tanning, and coloring materials	102.6	101.3	100.6	100.4	99.4	97.4	96.9	97.1	97.1	97.9	97.7	95.4	95.0
54	Medicinal and pharmaceutical products	101.3	100.1	99.9	99.0	97.8	96.6	96.0	96.0	95.4	96.3	96.4	96.2	95.7
55	Essential oils; polishing and cleaning preparations	100.2	101.3	100.7	100.1	99.4	98.7	98.2	98.8	98.7	97.0	96.9	97.8	97.0
57	Plastics in primary forms (12/92 = 100)	93.5	93.4	95.7	95.0	94.5	92.4	91.6	89.6	90.9	91.6	91.7	91.9	92.6
58	Plastics in nonprimary forms (12/92 = 100)	86.7	87.2	86.0	86.7	85.7	85.7	86.1	86.2	85.8	88.6	88.7	87.4	87.0
59	Chemical materials and products, n.e.s.	108.0	107.6	107.3	105.8	105.5	104.7	104.6	104.2	104.2	103.5	103.2	103.3	103.1
6	**Manufactured goods classified chiefly by materials**	97.0	96.0	95.4	95.5	95.3	95.4	96.0	95.9	96.4	96.8	96.6	96.6	96.9
62	Rubber manufactures, n.e.s.	99.6	99.3	98.6	98.5	98.4	97.9	97.4	97.5	97.4	97.6	96.7	95.8	95.0
64	Paper, paperboard, and articles of paper, pulp, and paperboard	93.1	89.5	87.5	86.2	84.2	83.8	85.0	85.6	87.9	87.5	87.6	88.0	88.7
66	Nonmetallic mineral manufactures, n.e.s.	102.3	102.2	102.7	103.0	103.5	103.6	103.2	102.8	103.2	102.6	103.0	102.5	102.0
68	Nonferrous metals	86.7	85.0	83.8	84.6	86.1	87.7	91.1	90.6	91.8	95.1	94.2	95.2	97.6
69	Manufactures of metals, n.e.s.	101.1	100.9	100.8	101.0	100.3	99.9	99.5	99.0	98.9	99.0	98.8	98.3	98.1
7	**Machinery and transport equipment**	98.6	98.4	98.1	98.1	97.1	96.8	96.5	96.0	95.5	95.7	95.4	95.0	94.7
72	Machinery specialized for particular industries	101.3	101.2	101.0	101.5	101.1	100.6	99.7	99.2	98.9	99.3	99.3	98.6	98.5
74	General industrial machines and parts, n.e.s., and machine parts	101.4	101.2	100.7	100.7	100.6	99.6	98.5	98.1	97.9	98.3	98.2	97.6	97.3
75	Computer equipment and office machines	89.9	89.4	88.7	88.2	86.6	85.6	84.4	83.2	81.9	81.2	80.2	78.9	78.1
76	Telecommunications and sound recording and reproducing apparatus and equipment	96.5	96.3	96.0	95.8	94.7	94.7	94.4	93.7	93.1	93.4	93.3	92.9	92.7
77	Electrical machinery and equipment	94.9	94.2	93.3	92.7	90.3	90.2	90.8	90.1	89.8	90.2	89.7	89.6	89.1
78	Road vehicles	101.0	100.9	100.7	100.8	100.7	100.6	100.8	100.6	100.4	100.8	100.9	101.1	101.2
85	Footwear	101.0	100.8	100.7	100.9	101.4	101.7	101.0	101.0	100.9	101.1	101.2	101.1	100.8
88	Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.	97.8	97.6	97.1	96.9	96.5	96.0	95.3	95.6	94.3	94.4	95.1	94.4	93.7

35. U.S. export price indexes by end-use category

[1995 = 100]

Category	1996				1997								
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
ALL COMMODITIES	99.9	99.7	99.3	99.3	99.4	99.6	99.7	99.7	99.4	99.3	99.2	99.3	98.9
Foods, feeds, and beverages	109.2	105.9	103.9	102.7	102.4	104.3	106.1	105.8	104.6	102.3	101.1	101.8	101.8
Agricultural foods, feeds, and beverages	110.9	107.2	104.7	103.4	103.1	105.6	107.6	107.4	106.3	103.8	102.3	102.5	102.2
Nonagricultural (fish, beverages) food products	94.4	95.2	97.5	97.4	96.2	91.4	90.7	89.4	88.0	87.6	89.0	96.3	98.6
Industrial supplies and materials	95.1	95.3	94.8	95.0	95.2	95.3	95.3	95.3	95.2	95.5	95.7	95.5	95.1
Agricultural industrial supplies and materials	95.1	95.7	93.3	93.8	95.9	95.8	95.9	94.1	92.6	91.6	92.2	92.3	93.0
Fuels and lubricants	111.3	114.0	114.2	114.8	114.7	111.4	110.7	110.2	110.0	110.0	110.1	110.4	110.7
Nonagricultural supplies and materials, excluding fuel and building materials	92.4	92.2	91.6	91.8	91.8	92.3	92.5	92.8	92.8	93.3	93.6	93.2	92.8
Selected building materials	96.7	97.1	97.7	97.9	98.2	98.6	97.1	95.5	95.4	94.8	94.7	94.1	93.4
Capital goods	100.6	100.5	100.5	100.5	100.6	100.4	100.4	100.3	100.1	100.2	100.0	100.0	99.4
Electric and electrical generating equipment	100.7	100.6	100.5	100.6	100.6	100.3	100.5	100.7	100.6	101.1	101.2	102.0	101.6
Nonelectrical machinery	99.0	98.9	98.7	98.6	98.5	98.4	98.3	98.2	97.9	97.7	97.4	97.4	96.7
Automotive vehicles, parts, and engines	101.1	101.3	101.5	101.5	101.7	101.7	101.9	102.2	102.1	102.1	102.3	102.2	102.1
Consumer goods, excluding automotive	101.6	101.6	101.6	101.8	101.9	102.0	101.7	101.8	101.9	102.0	102.2	102.3	102.4
Nondurables, manufactured	101.5	101.5	101.4	101.6	101.6	101.6	101.4	101.1	101.2	101.5	101.7	101.7	101.8
Durables, manufactured	101.5	101.3	101.3	101.3	101.6	101.7	101.4	102.0	102.1	102.0	102.0	102.2	102.0
Agricultural commodities	107.4	104.6	102.2	101.3	101.4	103.5	105.1	104.7	103.4	101.3	100.1	100.3	100.2
Nonagricultural commodities	99.0	99.0	99.0	99.1	99.1	99.1	99.0	99.0	99.0	99.1	99.1	99.1	98.7

36. U.S. import price indexes by end-use category

[1995 = 100]

Category	1996				1997								
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
ALL COMMODITIES	101.3	101.8	101.6	101.9	101.6	100.7	99.4	98.3	98.3	98.2	98.0	97.9	97.8
Foods, feeds, and beverages	98.2	98.4	97.9	96.8	96.7	98.5	101.4	99.6	100.8	101.9	99.3	99.2	100.1
Agricultural foods, feeds, and beverages	98.1	98.3	97.6	95.7	95.7	97.8	101.8	99.0	100.3	101.3	97.4	97.3	98.6
Nonagricultural (fish, beverages) food products	98.4	98.5	98.6	99.5	99.0	100.1	100.1	100.9	101.8	103.1	104.2	104.1	104.1
Industrial supplies and materials	106.5	109.0	108.8	110.1	111.0	107.7	103.4	100.4	101.0	100.4	100.2	100.9	101.0
Fuels and lubricants	123.5	131.7	131.6	135.4	138.8	128.1	114.3	105.8	106.8	104.9	104.6	106.9	106.9
Petroleum and petroleum products	124.4	133.2	132.1	134.7	135.5	124.5	113.7	105.3	106.6	104.5	103.2	105.8	105.7
Paper and paper base stocks	86.3	83.8	82.4	80.9	79.5	79.0	79.8	80.1	82.0	81.9	82.1	82.7	83.3
Materials associated with nondurable supplies and materials	97.4	97.6	97.6	97.6	97.0	96.8	96.9	96.1	96.3	95.8	95.5	95.6	95.0
Selected building materials	114.0	109.9	112.1	110.3	111.0	114.0	114.7	113.7	114.8	112.3	112.8	111.7	111.8
Unfinished metals associated with durable goods	93.3	92.6	91.8	92.4	92.9	93.6	95.5	95.8	96.2	98.0	97.5	97.6	98.7
Nonmetals associated with durable goods	97.8	97.8	97.8	98.3	97.9	97.3	96.7	96.0	95.8	95.7	95.6	95.1	94.2
Capital goods	97.0	96.7	96.3	96.1	94.4	93.9	93.5	92.6	92.0	92.1	91.7	91.0	90.5
Electric and electrical generating equipment	99.1	99.3	99.0	99.0	98.8	98.4	97.6	97.6	97.3	97.1	96.9	97.0	96.7
Nonelectrical machinery	96.0	95.5	94.8	94.5	92.7	92.1	91.7	90.7	90.0	90.1	89.7	88.9	88.2
Automotive vehicles, parts, and engines	100.9	100.7	100.6	100.8	100.7	100.7	100.8	100.6	100.3	100.8	100.9	101.0	101.1
Consumer goods, excluding automotive	100.4	100.2	100.1	100.1	100.0	100.2	99.6	99.6	99.7	99.5	99.6	99.4	99.2
Nondurables, manufactured	100.9	100.7	100.7	100.5	100.6	100.6	100.5	100.8	101.0	101.0	100.9	100.9	100.8
Durables, manufactured	99.9	99.8	99.6	99.6	99.3	99.0	98.5	98.4	98.0	98.1	98.1	97.8	97.5
Nonmanufactured consumer goods	99.4	99.8	99.4	101.0	101.4	108.2	100.4	98.9	102.8	99.1	99.8	99.8	98.7

37. U.S. international price indexes for selected categories of services

[1990 = 100, unless otherwise indicated]

Category	1995		1996				1997		
	Sept	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.
Air freight (inbound) (9/90 = 100)	98.0	98.7	95.9	95.1	95.6	95.0	89.5	89.9	88.5
Air freight (outbound) (9/92 = 100)	100.4	99.7	99.1	99.4	98.9	99.2	99.8	99.2	98.8
Air passenger fares (U.S. carriers)	103.6	96.1	98.3	104.3	107.3	101.6	97.1	112.1	109.2
Air passenger fares (foreign carriers)	102.0	96.9	96.3	103.0	105.5	100.7	98.5	106.1	104.2
Ocean liner freight (inbound)	101.5	101.1	101.5	99.6	98.0	98.4	97.6	96.8	94.9

38. Indexes of productivity, hourly compensation, and unit costs, quarterly data seasonally adjusted

[1992 = 100]

Item	Quarterly indexes												
	1994			1995				1996				1997	
	II	III	IV	I	II	III	IV	I	II	III	IV	I	II
Business													
Output per hour of all persons	100.7	100.5	100.7	100.2	100.4	100.6	101.1	101.6	102.3	102.0	102.5	102.9	103.6
Compensation per hour	104.0	104.4	105.1	105.8	106.6	107.3	108.1	108.9	110.1	111.0	111.9	113.1	114.0
Real compensation per hour	98.8	98.3	98.3	98.3	98.3	98.4	98.6	98.4	98.8	98.9	98.9	99.4	99.9
Unit labor costs	103.2	103.9	104.3	105.6	106.1	106.7	107.0	107.1	107.7	108.8	109.2	109.9	110.0
Unit nonlabor payments	106.5	107.4	108.3	108.3	108.4	108.8	109.2	110.6	111.1	110.8	111.4	111.8	112.5
Implicit price deflator	104.4	105.1	105.8	106.5	107.0	107.4	107.8	108.4	108.9	109.6	110.0	110.6	110.9
Nonfarm business													
Output per hour of all persons	100.7	100.4	100.8	100.3	100.5	100.8	101.2	101.7	102.2	102.0	102.4	102.8	103.5
Compensation per hour	103.9	104.2	105.0	105.6	106.4	107.1	107.9	108.7	109.8	110.6	111.5	112.8	113.7
Real compensation per hour	98.7	98.1	98.2	98.2	98.1	98.3	98.4	98.3	98.5	98.6	98.5	99.1	99.6
Unit labor costs	103.1	103.8	104.2	105.3	105.8	106.3	106.6	106.9	107.4	108.5	108.9	109.7	109.8
Unit nonlabor payments	107.0	108.1	109.2	109.5	109.6	109.7	109.8	111.1	111.4	111.0	111.6	111.9	112.4
Implicit price deflator	104.5	105.3	106.0	106.8	107.2	107.5	107.8	108.4	108.8	109.4	109.8	110.5	110.8
Nonfinancial corporations													
Output per hour of all employees	103.0	103.1	103.8	103.0	103.5	104.7	105.2	105.6	106.4	107.0	107.6	108.1	108.9
Compensation per hour	103.7	104.0	104.6	105.2	106.0	106.6	107.3	107.8	109.0	109.9	110.7	111.9	112.8
Real compensation per hour	98.5	97.9	97.9	97.8	97.7	97.8	97.8	97.5	97.8	97.9	97.8	98.3	98.8
Total unit costs	100.1	100.5	100.3	101.6	101.8	101.1	101.2	101.4	101.4	101.5	101.5	101.8	101.8
Unit labor costs	100.6	100.9	100.8	102.2	102.4	101.9	102.0	102.1	102.4	102.7	102.9	103.5	103.5
Unit nonlabor costs	98.8	99.5	99.1	99.8	100.1	99.0	99.1	99.2	98.4	98.1	97.4	97.0	96.9
Unit profits	132.4	136.3	142.1	135.2	134.9	145.5	147.3	152.5	154.7	156.0	156.4	157.9	159.4
Unit nonlabor payments	108.1	109.7	111.0	109.6	109.7	111.9	112.4	114.0	114.0	114.1	113.7	113.8	114.2
Implicit price deflator	103.1	103.7	104.1	104.6	104.8	105.1	105.4	106.0	106.2	106.4	106.5	106.9	107.0
Manufacturing													
Output per hour of all persons	104.8	105.2	105.7	106.7	107.6	108.8	109.2	110.3	111.0	112.4	113.5	114.2	114.9
Compensation per hour	105.3	105.9	106.6	107.2	108.2	109.2	110.1	110.8	112.1	112.9	113.5	114.7	115.4
Real compensation per hour	100.0	99.8	99.8	99.6	99.8	100.2	100.4	100.2	100.5	100.6	100.3	100.8	101.1
Unit labor costs	100.4	100.7	100.9	100.5	100.5	100.4	100.8	100.4	101.0	100.4	100.0	100.4	100.5

39. Annual indexes of multifactor productivity and related measures, selected years

[1987 = 100]

Item	1960	1970	1973	1980	1988	1989	1990	1991	1992	1993	1994	1995
Private business												
Productivity:												
Output per hour of all persons	53.5	74.8	83.0	89.1	100.9	101.0	101.9	102.9	105.9	106.4	107.3	107.3
Output per unit of capital services	115.9	115.1	120.1	105.8	101.3	101.3	99.8	97.0	98.1	99.1	100.7	100.7
Multifactor productivity	70.5	87.2	95.3	96.0	100.5	100.2	100.1	99.1	100.5	101.0	101.8	101.8
Output	37.8	57.4	67.9	79.9	104.3	107.0	107.9	106.5	109.3	112.5	117.4	117.4
Inputs:												
Labor input	66.7	74.2	78.7	86.8	104.2	107.2	107.8	106.5	107.5	110.4	114.8	114.8
Capital services	32.6	49.9	56.6	75.5	102.9	105.7	108.1	109.8	111.4	113.5	116.6	116.6
Combined units of labor and capital input	53.6	65.8	71.3	83.2	103.8	106.7	107.9	107.5	108.7	111.3	115.4	115.4
Capital per hour of all persons	46.2	65.0	69.2	84.2	99.6	99.7	102.1	106.1	108.0	107.4	106.6	106.6
Private nonfarm business												
Productivity:												
Output per hour of all persons	57.7	77.3	85.6	90.6	100.9	100.7	101.3	102.5	105.1	105.6	106.4	106.4
Output per unit of capital services	122.6	120.5	125.2	108.2	101.3	100.8	99.1	96.2	96.9	98.1	99.3	99.3
Multifactor productivity	74.9	89.9	98.1	97.7	100.5	99.9	99.4	98.5	99.6	100.2	100.7	100.7
Output	37.4	57.4	68.3	80.2	104.5	107.1	107.8	106.4	108.9	112.4	117.1	117.1
Inputs:												
Labor input	61.4	72.0	76.9	85.7	104.4	107.6	108.3	106.8	108.0	111.2	115.6	115.6
Capital services	30.5	47.7	54.5	74.2	103.2	106.2	108.8	110.6	112.4	114.7	118.0	118.0
Combined units of labor and capital input	49.9	63.9	69.6	82.1	104.0	107.2	108.5	107.9	109.3	112.2	116.3	116.3
Capital per hour of all persons	47.0	64.1	68.3	83.8	99.6	99.9	102.2	106.6	108.5	107.7	107.1	107.1
Manufacturing												
Productivity:												
Output per hour of all persons	45.9	61.3	69.4	79.1	101.1	102.8	104.7	107.2	111.1	113.4	–	–
Output per unit of capital services	122.7	116.6	126.9	102.5	101.6	100.6	97.0	93.0	93.5	94.5	–	–
Multifactor productivity	67.6	80.1	87.8	86.4	100.6	100.3	99.8	99.7	102.4	103.5	–	–
Output	40.8	61.6	74.0	82.1	104.2	106.4	105.9	104.1	107.2	111.0	–	–
Inputs:												
Hours of all persons	88.9	100.6	106.6	103.8	103.1	103.5	101.2	97.1	96.5	97.8	–	–
Capital services	33.2	52.8	58.3	80.1	102.6	105.8	109.2	111.9	114.6	117.4	–	–

– Data not available.

NOTE: Productivity and output in this table have not been revised for consistency with the December 1991 comprehensive revisions to the National Income and Product Accounts.

40. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years

[1992 = 100]

Item	1960	1970	1973	1986	1988	1989	1990	1991	1993	1994	1995	1996
Business												
Output per hour of all persons	51.4	70.5	78.4	94.0	94.6	95.4	96.1	96.7	100.2	100.6	100.5	102.0
Compensation per hour	13.6	23.6	29.0	76.8	83.5	85.8	90.7	95.1	102.6	104.3	106.9	110.4
Real compensation per hour	64.7	85.4	91.6	98.3	99.0	97.1	97.4	97.9	99.6	98.7	98.4	98.7
Unit labor costs	26.6	33.5	37.0	81.7	88.2	89.9	94.4	98.3	102.4	103.7	106.3	108.2
Unit nonlabor payments	24.6	30.6	36.6	81.7	84.1	91.3	93.5	96.6	102.7	106.8	108.7	111.0
Implicit price deflator	25.8	32.4	36.8	81.7	86.8	90.4	94.1	97.7	102.5	104.8	107.2	109.2
Nonfarm business												
Output per hour of all persons	54.8	72.6	80.7	94.7	95.2	95.7	96.2	96.9	100.1	100.5	100.7	102.0
Compensation per hour	14.3	23.8	29.2	77.2	83.6	85.8	90.6	95.1	102.3	104.1	106.7	110.1
Real compensation per hour	67.7	86.1	92.3	98.8	99.1	97.1	97.3	97.9	99.3	98.5	98.3	98.4
Unit labor costs	26.1	32.8	36.2	81.5	87.8	89.7	94.1	98.1	102.2	103.6	106.0	107.9
Unit nonlabor payments	24.0	30.3	34.3	81.3	83.8	90.7	93.2	96.8	103.1	107.4	109.7	111.3
Implicit price deflator	25.3	31.9	35.5	81.4	86.4	90.0	93.8	97.6	102.5	104.9	107.3	109.1
Nonfinancial corporations												
Output per hour of all employees	54.5	69.0	74.4	93.7	96.7	95.4	96.1	97.5	101.2	103.3	104.1	106.6
Compensation per hour	15.6	25.4	30.7	78.7	84.8	86.9	91.4	95.6	102.1	103.9	106.3	109.4
Real compensation per hour	73.9	91.7	97.2	100.8	100.6	98.4	98.1	98.5	99.1	98.4	97.9	97.8
Total unit costs	27.8	36.1	37.9	84.9	88.2	92.5	96.2	99.3	100.5	100.3	101.4	101.4
Unit labor costs	28.6	36.7	41.3	84.0	87.7	91.1	95.2	98.0	100.9	100.6	102.1	102.6
Unit nonlabor costs	25.3	34.3	37.5	87.5	89.7	96.3	99.1	103.0	99.4	99.7	99.5	98.3
Unit profits	47.7	42.0	52.8	88.0	103.8	96.0	94.6	93.9	113.3	134.5	140.8	154.9
Unit nonlabor payments	31.5	36.4	41.7	87.7	93.6	96.2	97.9	100.5	103.2	109.4	110.9	114.0
Implicit price deflator	29.6	36.6	41.5	85.2	89.6	92.8	96.1	98.8	101.7	103.4	105.0	106.3
Manufacturing												
Output per hour of all persons	41.2	55.1	62.6	87.6	91.4	92.6	94.3	96.4	102.2	104.7	108.1	111.7
Compensation per hour	14.9	23.8	28.6	78.6	84.0	86.8	91.0	95.7	102.9	105.6	108.7	112.2
Real compensation per hour	70.6	86.1	90.5	100.6	99.6	98.2	97.6	98.6	99.9	100.0	100.1	100.3
Unit labor costs	36.1	43.2	45.7	89.8	91.9	93.7	96.5	99.3	100.7	100.8	100.6	100.5
Unit nonlabor payments	26.6	30.1	37.0	85.7	91.2	96.8	100.1	99.6	101.1	103.0	107.8	–
Implicit price deflator	30.3	35.2	40.4	87.3	91.5	95.6	98.7	99.5	101.0	102.2	105.0	–

– Data not available.

41. Annual indexes of output per hour for selected industries

[1987 = 100]

Industry	SIC	1973	1984	1985	1986	1988	1989	1990	1991	1992	1993	1994	1995
Iron mining, usable ore	101	50.8	70.0	76.1	79.3	103.1	98.4	88.5	85.0	83.3	86.9	85.0	95.9
Copper mining, recoverable metal	102	42.4	75.9	93.6	109.7	109.1	106.5	102.7	100.5	115.2	118.1	126.0	120.3
Coal mining	12	68.9	83.4	85.1	92.4	110.5	116.4	118.3	122.1	132.7	140.4	147.3	153.9
Crude petroleum and natural gas production	131	173.5	81.9	83.0	90.3	100.9	98.0	96.9	97.9	102.1	105.9	112.4	120.5
Nonmetallic minerals, except fuels	14	86.5	94.0	95.1	95.1	101.0	99.6	101.4	98.5	103.0	100.8	104.4	103.0
Meat packing plants	2011	65.1	93.6	98.3	98.7	100.9	97.9	96.8	100.2	104.5	105.1	101.0	101.7
Sausages and other prepared meats	2013	67.2	99.3	97.8	98.6	107.1	105.9	97.4	95.9	104.6	105.0	101.4	105.3
Poultry dressing and processing	2015	58.0	99.1	100.5	95.6	96.2	105.2	108.6	115.4	119.6	119.8	119.4	122.5
Cheese, natural and processed	2022	72.1	85.1	88.2	93.5	99.8	102.6	108.2	114.6	121.8	115.5	117.5	120.5
Fluid milk	2026	54.6	88.9	92.0	96.0	102.3	103.7	103.3	104.3	104.0	107.1	112.9	115.8
Canned fruits and vegetables	2033	70.1	87.4	92.8	99.1	98.7	92.9	93.8	100.1	101.5	106.6	101.5	109.3
Frozen fruits and vegetables	2037	77.9	99.7	95.2	103.3	94.0	98.0	90.0	94.6	96.4	102.8	109.3	111.1
Flour and other grain mill products	2041	68.5	91.7	95.8	95.9	102.5	102.5	107.9	108.3	111.9	122.2	126.8	117.6
Cereal breakfast foods	2043	65.6	92.8	97.1	98.6	98.6	95.5	100.2	102.3	99.1	95.5	106.6	118.4
Rice milling	2044	59.3	63.8	68.6	72.7	83.1	97.5	104.9	99.3	101.4	129.5	109.2	102.6
Wet corn milling	2046	24.1	74.9	74.6	97.3	96.1	103.6	103.8	100.4	101.8	112.0	110.0	122.5
Prepared feeds for animals and fowls	2047,48	51.6	89.2	96.9	95.2	101.5	103.7	107.0	108.0	108.1	110.7	108.5	115.6
Bakery products	205	82.3	93.4	95.6	100.1	93.4	91.0	93.2	89.2	89.4	90.3	91.1	92.2
Raw and refined cane sugar	2061,62	78.5	89.1	96.6	96.9	99.7	101.8	107.7	110.3	111.7	120.2	115.0	121.8
Beet sugar	2063	75.9	79.7	73.4	80.8	97.6	92.1	97.6	102.3	110.8	109.8	124.2	135.9
Malt beverages	2082	43.3	77.7	73.7	85.0	99.1	105.2	110.6	109.6	113.4	112.6	117.5	118.0
Bottled and canned soft drinks	2086	49.2	81.6	85.2	91.4	109.8	119.4	126.7	135.1	144.2	144.7	150.4	160.0
Fresh or frozen prepared fish	2092	93.3	89.4	87.8	91.2	100.0	94.6	88.9	87.4	95.6	100.1	93.2	88.1
Cigarettes, chewing and smoking tobacco	211,3	79.4	91.3	93.6	95.4	104.8	106.7	109.9	111.6	113.4	101.6	130.1	149.2
Cotton and synthetic broadwoven fabrics	221,2	58.1	91.1	94.8	101.1	100.0	103.9	108.1	113.8	118.4	125.8	134.1	142.8
Hosiery	2251,52	63.2	102.4	100.9	102.5	108.1	110.9	109.2	115.7	122.2	117.4	124.8	127.1
Yarn spinning mills	2281	55.9	86.2	89.6	93.2	98.5	103.3	106.0	105.5	114.1	120.0	125.5	133.2
Men's and boys' suits and coats	231	75.6	93.2	106.3	103.5	102.4	101.9	98.7	91.4	102.4	109.0	129.1	121.5
Housefurnishings, except curtains and draperies	2392	87.2	83.6	92.4	93.6	99.8	96.8	101.3	110.9	117.9	118.7	114.1	115.4
Sawmills and planing mills, general	2421	68.3	89.7	93.5	102.3	101.2	100.1	99.9	102.9	108.9	101.5	103.2	110.3
Hardwood dimension and flooring mills	2426	84.0	85.6	95.1	98.8	97.5	96.9	95.7	98.6	105.4	111.2	111.0	117.1
Millwork	2431	104.2	100.4	97.4	102.2	98.2	97.8	97.8	95.7	93.4	92.5	88.5	86.0
Wood kitchen cabinets	2434	80.5	91.6	87.1	85.2	97.7	91.1	93.6	92.3	102.0	101.9	101.3	102.8
Hardwood veneer and plywood	2435	80.2	83.9	84.5	83.2	99.0	98.9	92.2	93.3	104.1	106.1	90.5	84.2
Softwood veneer and plywood	2436	67.7	87.1	88.3	90.4	100.6	102.6	108.3	114.3	109.2	103.4	101.4	101.5
Wood containers	244	–	103.4	99.6	98.7	103.2	108.8	111.6	113.5	109.8	100.5	101.0	107.1
Mobile homes	2451	–	94.4	94.3	94.4	100.6	98.8	101.2	102.5	102.4	103.8	97.6	99.7
Wood household furniture	2511,17	88.5	96.9	95.0	99.6	100.8	101.2	102.5	101.3	106.5	106.2	105.7	109.1
Upholstered household furniture	2512	75.1	96.2	96.3	101.7	98.8	101.2	107.7	115.1	120.0	120.0	130.6	138.7
Metal household furniture	2514	68.7	84.9	89.4	95.3	100.2	100.7	101.4	107.2	109.5	106.8	96.1	95.1
Mattresses and bedsprings	2515	68.0	84.1	79.5	85.5	92.5	106.5	106.2	108.9	103.4	104.4	105.5	110.9
Wood office furniture	2521	82.5	99.3	99.4	96.2	95.4	95.4	97.4	101.3	107.1	104.4	104.0	103.3
Office furniture, except wood	2522	70.6	97.6	96.9	100.6	96.0	98.7	95.6	92.9	93.9	94.3	95.4	98.4
Pulp, paper, and paperboard mills	261,2,3	67.1	89.7	87.6	93.3	103.1	103.2	102.6	102.1	104.7	104.5	112.4	116.2
Corrugated and solid fiber boxes	2635	70.3	96.7	99.6	102.8	99.8	98.1	100.9	100.8	101.9	105.5	110.0	107.6
Folding paperboard boxes	2657	86.4	93.4	90.0	88.5	101.6	105.4	105.3	110.9	116.4	117.9	122.9	126.8
Paper and plastic bags	2673,74	90.7	99.9	99.7	101.8	97.7	93.7	92.2	89.5	93.9	92.0	96.5	91.7
Alkalies and chlorine	2812	38.4	66.6	70.8	97.7	101.6	92.5	92.3	86.2	87.7	84.8	84.1	87.7
Inorganic pigments	2816	72.6	81.4	84.4	88.6	103.3	107.8	104.5	98.9	107.8	107.8	115.0	108.1
Industrial inorganic chemicals, n.e.s.	2819 pt.	90.6	88.4	87.3	88.6	97.5	105.9	109.0	102.3	104.9	110.7	113.2	126.5
Synthetic fibers	2823,24	38.4	79.8	79.3	90.8	102.9	104.1	98.7	97.5	99.3	112.3	119.4	125.7
Soaps and detergents	2841	89.1	90.5	91.5	92.3	102.4	109.4	128.2	126.4	115.3	112.6	111.7	126.0
Cosmetics and other toiletries	2844	88.6	87.3	90.3	96.6	105.2	102.7	101.1	103.9	108.4	108.5	111.6	115.2
Paints and allied products	285	63.2	93.6	96.9	98.0	101.4	103.3	106.3	104.3	102.9	108.8	116.7	116.6
Industrial organic chemicals, n.e.c.	2869	73.1	89.6	87.8	92.3	110.5	110.5	99.0	92.6	91.6	88.5	96.2	93.3
Nitrogenous fertilizers	2873	65.4	101.1	100.7	90.5	101.3	103.3	107.7	108.4	111.8	117.5	111.1	107.6
Phosphatic fertilizers	2874	62.4	88.4	84.2	79.6	92.0	83.3	99.7	107.3	105.0	106.0	122.6	118.1
Fertilizers, mixing only	2875	90.5	97.8	100.8	95.1	104.7	112.4	112.8	114.6	127.1	139.1	118.9	119.9
Agricultural chemicals, n.e.c.	2879	74.3	98.8	92.9	93.2	108.4	108.9	106.2	102.2	108.4	111.0	115.6	124.9
Petroleum refining	291	84.0	78.7	84.7	94.9	105.3	109.6	109.2	106.6	111.3	120.1	123.8	133.0
Tires and inner tubes	301	56.0	88.8	89.3	92.6	102.9	103.8	103.0	102.4	107.8	116.5	124.1	131.4
Rubber and plastics hose and belting	3052	78.4	104.9	100.1	102.1	108.2	97.8	103.3	96.1	104.3	111.3	102.9	102.0
Miscellaneous plastics products, n.e.c.	308	72.8	86.4	88.2	88.9	100.1	101.1	105.3	107.5	114.0	116.2	119.8	120.2
Footwear, except rubber	314	90.7	98.8	100.3	101.9	102.3	100.9	92.8	93.1	93.3	96.4	106.0	101.2
Glass containers	3221	75.2	97.4	93.4	98.5	99.6	101.6	107.5	108.1	111.5	106.0	111.0	109.9
Cement, hydraulic	324	71.3	89.4	91.8	97.1	103.2	110.2	112.4	108.3	115.1	119.9	125.6	123.4
Clay construction products	3251,53,59	78.5	92.7	94.2	95.5	105.2	98.3	102.3	97.4	98.9	102.3	108.0	111.3
Clay refractories	3255	80.1	96.9	94.9	100.8	102.3	98.5	103.6	97.9	98.6	95.0	107.3	96.0
Concrete products	3271,72	92.5	98.3	99.5	104.4	102.1	104.8	103.8	104.9	103.2	109.3	108.6	114.3
Ready-mixed concrete	3273	99.1	92.9	93.6	96.0	100.2	101.0	100.2	96.7	98.2	96.9	93.0	95.8
Steel	331	64.2	81.3	85.8	89.7	113.5	108.5	110.5	108.2	117.7	134.0	144.6	145.4
Gray and ductile iron foundries	3321	91.3	99.1	96.9	99.3	108.0	106.9	107.9	104.6	107.7	113.1	115.5	112.4
Steel foundries	3324,25	105.8	102.4	99.5	104.9	95.5	96.3	96.9	94.8	95.6	101.5	102.2	106.2
Primary copper	3331	32.8	57.6	73.8	88.7	103.8	94.7	84.9	82.5	71.9	86.9	74.0	77.3
Primary aluminum	3334	73.6	100.7	97.6	102.7	102.3	104.8	106.5	110.6	109.7	105.7	99.0	102.2
Copper rolling and drawing	3351	77.5	84.7	86.2	92.3	93.0	89.1	90.7	86.4	83.0	89.2	96.6	96.6

See footnotes at end of table.

41. Continued—Annual indexes of output per hour for selected industries

[1987 = 100]

Industry	SIC	1973	1984	1985	1986	1988	1989	1990	1991	1992	1993	1994	1995
Aluminum rolling and drawing	3353,54,55	79.0	92.3	85.7	95.8	96.3	90.6	91.2	90.3	96.5	93.9	99.6	93.9
Metal cans	3411	59.2	101.1	99.2	95.9	106.9	108.1	117.5	123.8	129.7	134.6	140.7	146.3
Hand and edge tools, n.e.c.	3423	108.6	97.9	98.8	97.1	100.5	101.0	95.0	93.1	93.1	93.3	100.8	98.4
Heating equipment, except electric	3433	78.0	91.6	91.9	96.2	113.7	105.0	114.0	119.4	121.2	121.8	130.2	131.1
Fabricated structural metal	3441	97.1	91.2	99.0	99.0	100.4	97.6	101.2	104.5	103.6	108.1	109.8	110.1
Metal doors, sash, and trim	3442	90.5	101.4	104.8	102.0	104.6	105.8	103.1	103.0	106.7	105.5	103.3	96.8
Fabricated plate work	3443	–	88.3	87.5	86.4	96.2	90.3	94.1	94.3	98.3	98.3	109.3	109.4
Bolts, nuts, rivets, and washers	3452	75.8	85.3	88.8	91.0	97.0	93.8	93.7	96.1	91.9	92.8	95.8	100.5
Automotive stampings	3465	74.9	100.5	94.5	95.7	102.8	101.8	96.1	97.3	113.8	120.8	124.9	128.4
Metal stampings, n.e.c.	3469	96.8	94.3	88.6	93.9	98.0	95.3	90.4	89.5	98.8	104.8	109.3	112.8
Valves and pipe fittings	3491,92,94	93.6	95.0	94.4	93.9	101.4	101.2	102.1	101.7	100.4	104.2	109.7	109.7
Fabricated pipe and fittings	3498	140.8	130.0	120.0	121.4	99.6	102.3	107.0	114.2	109.6	113.3	112.9	113.0
Internal combustion engines, n.e.c.	3519	83.1	90.2	92.0	98.5	106.3	113.2	108.4	103.3	101.2	104.3	119.5	124.9
Farm machinery and equipment	3523	108.6	112.7	101.6	95.7	112.8	124.0	131.8	125.3	119.1	123.7	131.4	143.4
Lawn and garden equipment	3524	70.0	79.3	82.4	93.2	97.5	93.2	94.8	95.8	108.7	114.7	116.6	126.3
Construction machinery	3531	87.9	91.6	92.2	99.1	107.6	110.2	109.6	101.0	100.6	107.0	123.2	132.9
Mining machinery	3532	102.2	90.2	93.7	95.1	102.0	107.0	98.4	90.0	90.1	109.5	99.5	109.3
Oil and gas field machinery	3533	156.9	126.0	115.2	105.9	123.1	116.1	113.9	110.9	125.7	122.1	119.9	117.5
Metal cutting machine tools	3541	101.4	87.2	89.9	92.0	94.8	99.9	99.2	94.8	113.0	111.4	110.0	111.9
Metal forming machine tools	3542	112.5	90.7	93.1	93.7	113.1	107.9	97.7	88.4	102.5	115.0	104.3	116.2
Machine tool accessories	3545	105.9	94.6	92.3	95.0	98.2	102.5	104.1	104.6	96.8	101.5	114.8	122.3
Pumps and pumping equipment	3561,94	84.0	92.0	91.9	92.7	105.7	101.3	103.4	102.5	98.6	105.2	110.6	113.4
Ball and roller bearings	3562	108.0	95.4	91.6	94.1	102.9	99.0	93.1	89.6	97.8	103.8	106.3	107.2
Air and gas compressors	3563	87.6	90.1	92.2	96.0	103.7	105.3	107.8	110.2	112.7	111.5	117.3	115.0
Refrigeration and heating equipment	3585	100.3	100.1	98.1	95.8	104.0	109.0	106.3	104.8	107.6	111.8	115.1	115.0
Carburetors, pistons, rings, and valves	3592	102.9	95.1	98.8	95.7	109.9	119.4	114.1	115.1	126.4	136.4	142.9	143.0
Transformers, except electronic	3612	100.2	95.4	97.0	99.3	102.8	104.3	107.3	110.7	126.5	121.8	143.4	159.9
Switchgear and switchboard apparatus	3613	88.2	92.2	95.1	95.9	109.1	106.5	106.5	103.9	114.6	123.1	123.8	131.7
Motors and generators	3621	89.0	93.3	94.9	96.8	102.8	103.6	100.9	104.4	111.5	127.1	124.4	139.1
Household cooking equipment	3631	61.8	92.0	90.3	104.6	116.1	96.8	99.5	104.9	100.9	103.7	127.4	125.5
Household refrigerators and freezers	3632	70.1	97.5	104.1	101.2	103.3	105.2	107.3	111.8	116.0	116.8	126.7	124.2
Household laundry equipment	3633	72.3	92.8	93.8	97.4	106.1	98.7	104.0	111.0	115.9	144.8	150.5	131.6
Household appliances, n.e.c.	3639	63.7	85.9	86.3	89.1	100.6	96.3	91.8	80.5	91.6	117.6	118.9	116.0
Electric lamp bulbs and tubes	3641	61.3	86.4	94.2	91.5	100.3	92.7	98.0	101.8	112.8	100.9	98.9	95.9
Lighting fixtures and equipment	3645,46,47,48	84.1	91.3	96.7	103.0	98.1	97.3	96.0	94.3	98.9	103.7	110.0	107.5
Household audio and video equipment	3651	22.3	84.7	96.3	106.9	106.2	120.5	124.1	135.7	151.8	163.1	179.3	225.3
Motor vehicles and equipment	371	68.7	91.1	95.3	95.1	103.2	103.3	102.4	96.7	104.3	105.4	107.3	104.4
Aircraft	3721	79.2	84.7	94.2	93.5	105.8	107.5	112.9	131.4	141.7	142.5	131.8	132.5
Instruments to measure electricity	3825	63.7	96.2	95.4	90.4	106.1	105.2	106.2	108.3	119.0	122.4	144.7	163.6
Photographic equipment and supplies	386	58.9	88.2	86.1	94.1	105.6	113.0	107.8	110.2	116.4	126.9	132.7	129.4
Railroad transportation	4011	46.5	78.0	81.5	89.2	108.4	114.6	118.5	127.8	139.6	145.6	–	–
Bus carriers, class 1	411,13,14 pts.	116.8	100.1	96.1	95.6	107.9	104.6	–	–	–	–	–	–
Trucking, except local	4213	69.5	97.3	93.8	96.8	105.2	109.4	–	–	–	–	–	–
U.S. Postal service	43	88.6	98.1	98.4	100.0	99.9	99.7	104.0	103.7	104.5	107.1	106.6	106.5
Air transportation	4512,13,22 pts.	54.3	88.8	92.0	93.8	99.5	95.8	92.9	92.5	96.9	100.2	105.8	108.4
Petroleum pipelines	4612,13	93.2	99.4	99.9	102.0	104.8	103.2	102.5	99.0	100.2	104.4	108.1	117.7
Telephone communications	481	42.7	84.5	88.9	95.0	106.2	111.6	113.3	119.8	127.7	135.2	141.6	144.6
Electric utilities	491,3 pt.	88.4	93.8	93.0	95.3	104.9	107.7	110.1	113.4	115.2	120.6	126.8	135.0
Gas utilities	492,3 pt	145.5	114.1	111.9	102.1	105.5	103.5	94.8	94.0	95.3	107.0	102.2	105.9
Scrap and waste materials	5093	–	89.1	93.4	97.7	95.4	86.0	98.6	98.9	101.7	109.4	107.7	108.9
Hardware stores	525	83.3	96.6	95.6	101.6	108.6	115.2	110.4	102.5	107.2	106.7	114.5	106.4
Department stores	531	60.8	90.4	92.6	97.4	99.2	96.9	94.2	98.2	101.2	105.0	107.1	107.6
Variety stores	533	148.9	141.9	129.2	106.7	101.9	124.5	151.3	154.3	167.7	170.4	160.5	159.3
General merchandise stores	539	–	78.6	80.9	97.5	100.8	109.8	116.4	121.8	136.1	159.9	161.6	165.9
Grocery stores	541	109.1	107.9	105.7	103.8	98.9	95.4	94.6	93.7	93.3	92.7	92.2	91.2
Retail bakeries	546	125.6	96.0	87.6	93.6	89.8	83.3	89.7	94.7	94.0	85.6	85.6	84.6
New and used car dealers	551	85.1	99.5	99.8	101.6	103.5	102.5	106.1	104.2	106.5	107.4	108.3	107.1
Auto and home supply stores	553	71.1	90.4	94.5	94.3	103.2	101.5	102.8	98.9	98.9	98.9	103.0	106.8
Gasoline service stations	554	59.5	87.0	93.5	101.8	103.0	105.1	102.6	104.3	109.7	112.4	115.0	119.2
Men's and boys' clothing stores	561	77.6	93.7	98.3	100.7	106.0	109.3	112.8	117.7	116.4	115.7	120.9	122.6
Women's clothing stores	562	58.9	98.0	99.8	107.0	97.5	99.1	100.8	101.9	110.7	116.2	118.1	122.9
Family clothing stores	565	76.2	106.2	103.1	103.3	102.4	105.5	104.9	106.9	112.3	111.6	114.9	128.4
Shoe stores	566	81.3	90.6	97.6	105.5	102.7	107.2	106.2	105.1	111.5	110.8	120.5	123.8
Furniture and homefurnishings stores	571	83.9	97.9	94.8	101.2	98.9	101.3	102.2	101.6	108.6	108.9	111.0	116.4
Household appliance stores	572	59.8	87.2	94.9	106.5	98.5	103.5	102.8	105.2	113.9	114.6	115.9	119.9
Radio, television, and computer stores	573	45.6	79.1	89.3	94.1	119.3	115.7	120.9	129.6	143.5	157.3	178.4	195.6
Eating and drinking places	58	110.3	98.9	96.2	99.3	102.8	102.2	104.0	103.1	102.4	103.1	101.4	102.2
Drug stores and proprietary stores	591	92.2	106.4	102.5	101.6	101.9	102.5	103.6	104.7	103.6	104.7	103.7	102.8
Liquor stores	592	95.0	93.6	101.9	93.8	98.2	101.1	105.2	105.9	108.4	100.5	98.7	104.4
Miscellaneous shopping goods stores	594	–	92.6	94.1	97.1	98.4	101.7	101.5	102.0	100.6	103.9	108.2	114.0
Catalog and mail-order houses	5961	–	80.6	80.8	87.2	107.3	111.4	102.1	107.2	113.8	121.0	120.0	123.9
Commercial banks	602	81.2	89.6	94.3	96.2	102.9	101.3	104.6	107.4	109.4	119.5	119.5	124.4
Hotels and motels	701	102.4	101.6	101.2	98.9	97.6	95.0	96.0	99.0	107.6	106.8	111.0	113.2
Laundry, cleaning, and garment services	721	110.8	107.5	103.3	100.8	97.2	100.5	101.0	98.7	99.9	99.9	101.9	105.1
Beauty shops	723	85.9	98.5	96.1	96.9	95.1	99.6	96.8	94.8	99.6	96.5	101.1	104.8
Automotive repair shops	753	109.4	91.7	99.4	96.2	105.7	108.1	106.9	98.7	103.3	102.9	110.4	116.4

n.e.s. = not elsewhere specified.
n.e.c. = not elsewhere classified.
– Data not available.

42. Unemployment rates, approximating U.S. concepts, in nine countries, quarterly data seasonally adjusted

Country	Annual average		1995		1996				1997	
	1995	1996	III	IV	I	II	III	IV	I	II
United States	5.6	5.4	5.7	5.6	5.6	5.4	5.3	5.3	5.3	4.9
Canada	9.5	9.7	9.5	9.4	9.5	9.6	9.7	9.9	9.6	9.4
Australia	8.5	8.6	8.4	8.4	8.5	8.6	8.7	8.6	8.7	8.7
Japan	3.2	3.4	3.2	3.4	3.3	3.5	3.4	3.3	3.3	3.5
France	11.5	12.6	11.5	11.7	12.2	12.5	12.7	12.8	12.7	12.7
Germany	6.5	–	6.6	6.7	7.0	7.1	7.2	7.5	7.7	7.8
Italy[1]	12.0	12.1	11.9	11.9	12.0	12.5	11.9	12.0	12.3	12.7
Sweden	9.1	9.9	8.9	9.3	9.0	9.4	9.5	10.3	10.6	10.6
United Kingdom	8.8	–	8.8	8.6	8.4	8.4	8.1	8.0	7.6	7.3

[1] Quarterly rates are for the first month of the quarter.

– Data not available.

NOTE: Quarterly figures for France, Germany, and the United Kingdom are calculated by applying annual adjustment factors to current published data, and therefore should be viewed as less precise indicators of unemployment under U.S. concepts than the annual figures. See "Notes on the data" for information on breaks in series. For further qualifications and historical data, see *Comparative Labor Force Statistics, 10 Countries* (Bureau of Labor Statistics, August 1996).

43. Annual data: Employment status of the working-age population, approximating U.S. concepts, 10 countries

[Numbers in thousands]

Employment status and country	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Civilian labor force										
United States[1]	119,865	121,669	123,869	125,840	126,346	128,105	129,200	131,056	132,304	133,943
Canada	13,631	13,900	14,151	14,329	14,408	14,482	14,663	14,832	14,928	15,145
Australia	7,758	7,974	8,228	8,444	8,490	8,562	8,619	8,776	9,001	9,127
Japan	60,050	60,860	61,920	63,050	64,280	65,040	65,470	65,780	65,990	66,450
France	23,890	23,980	24,170	24,300	24,490	24,570	24,640	24,760	24,860	25,070
Germany	28,390	28,610	28,840	29,410	29,760	30,030	29,950	29,820	29,660	–
Italy	22,350	22,660	22,530	22,670	22,940	22,910	22,760	22,640	22,700	22,820
Netherlands	6,500	6,330	6,450	6,660	6,770	6,970	7,110	7,180	7,290	–
Sweden	4,437	4,494	4,552	4,597	4,591	4,520	4,443	4,418	4,460	4,459
United Kingdom	27,720	28,150	28,420	28,540	28,450	28,400	28,310	28,310	28,190	–
Participation rate[2]										
United States[1]	65.6	65.9	66.5	66.5	66.2	66.4	66.3	66.6	66.6	66.8
Canada	66.7	67.2	67.5	67.3	66.7	65.9	65.5	65.3	64.8	64.9
Australia	63.0	63.3	64.0	64.6	64.1	63.9	63.6	63.9	64.6	64.6
Japan	61.9	61.9	62.2	62.6	63.2	63.4	63.3	63.1	62.9	63.0
France	56.5	56.2	56.1	56.0	56.0	55.8	55.6	55.5	55.3	55.4
Germany	55.0	55.1	55.2	55.3	55.4	55.1	54.2	53.7	53.1	–
Italy	47.6	47.4	47.3	47.2	47.7	47.5	48.1	47.5	47.6	47.7
Netherlands	56.3	54.3	54.9	56.3	56.7	57.9	58.6	58.9	59.7	–
Sweden	66.4	66.9	67.3	67.4	67.0	65.7	64.5	63.9	64.3	64.3
United Kingdom	62.5	63.2	63.6	63.7	63.3	62.9	62.8	62.6	62.2	–
Employed										
United States[1]	112,440	114,968	117,342	118,793	117,718	118,492	120,259	123,060	124,900	126,708
Canada	12,422	12,819	13,086	13,165	12,916	12,842	13,015	13,292	13,506	13,676
Australia	7,129	7,398	7,720	7,859	7,676	7,637	7,680	7,921	8,235	8,344
Japan	58,320	59,310	60,500	61,710	62,920	63,620	63,810	63,860	63,890	64,200
France	21,320	21,520	21,850	22,100	22,140	22,010	21,730	21,710	21,940	21,920
Germany	26,590	26,800	27,200	27,950	28,480	28,660	28,230	27,880	27,720	–
Italy	20,590	20,870	20,770	21,080	21,360	21,230	20,430	20,080	19,970	20,050
Netherlands	5,850	5,850	5,990	6,250	6,370	6,570	6,640	6,650	6,760	–
Sweden	4,340	4,410	4,480	4,513	4,447	4,265	4,028	3,992	4,056	4,019
United Kingdom	24,860	25,730	26,350	26,550	25,930	25,520	25,340	25,580	25,710	–
Employment-population ratio[3]										
United States[1]	61.5	62.3	63.0	62.8	61.7	61.5	61.7	62.5	62.9	63.2
Canada	60.8	62.0	62.4	61.9	59.8	58.4	58.2	58.5	58.6	58.6
Australia	57.9	58.7	60.1	60.1	57.9	57.0	56.6	57.7	59.1	59.1
Japan	60.1	60.4	60.8	61.3	61.8	62.0	61.7	61.3	60.9	60.9
France	50.4	50.4	50.7	50.9	50.6	50.0	49.0	48.7	48.8	48.5
Germany	51.5	51.6	52.0	52.6	53.0	52.6	51.1	50.2	49.7	–
Italy	43.8	43.7	43.6	43.9	44.5	44.0	43.1	42.1	41.8	41.9
Netherlands	50.7	50.2	51.0	52.8	53.3	54.6	54.8	54.6	55.4	–
Sweden	65.0	65.7	66.2	66.1	64.9	62.0	58.5	57.6	58.4	57.9
United Kingdom	56.1	57.8	59.0	59.2	57.7	56.5	56.2	56.5	56.7	–
Unemployed										
United States[1]	7,425	6,701	6,528	7,047	8,628	9,613	8,940	7,996	7,404	7,236
Canada	1,208	1,082	1,065	1,164	1,492	1,640	1,649	1,541	1,422	1,469
Australia	629	576	508	585	814	925	939	856	766	783
Japan	1,730	1,550	1,420	1,340	1,360	1,420	1,660	1,920	2,100	2,250
France	2,570	2,460	2,320	2,200	2,350	2,560	2,910	3,050	2,920	3,150
Germany	1,800	1,810	1,640	1,460	1,280	1,370	1,720	1,940	1,940	–
Italy	1,760	1,790	1,760	1,590	1,580	1,680	2,330	2,560	2,720	2,760
Netherlands	650	480	450	410	400	390	470	520	530	–
Sweden	97	84	72	84	144	255	415	426	404	440
United Kingdom	2,860	2,420	2,070	1,990	2,520	2,880	2,970	2,730	2,480	–
Unemployment rate										
United States[1]	6.2	5.5	5.3	5.6	6.8	7.5	6.9	6.1	5.6	5.4
Canada	8.9	7.8	7.5	8.1	10.4	11.3	11.2	10.4	9.5	9.7
Australia	8.1	7.2	6.2	6.9	9.6	10.8	10.9	9.7	8.5	8.6
Japan	2.9	2.5	2.3	2.1	2.1	2.2	2.5	2.9	3.2	3.4
France	10.8	10.3	9.6	9.1	9.6	10.4	11.8	12.3	11.8	12.6
Germany	6.3	6.3	5.7	5.0	4.3	4.6	5.7	6.5	6.5	–
Italy	7.9	7.9	7.8	7.0	6.9	7.3	10.2	11.3	12.0	12.1
Netherlands	10.0	7.6	7.0	6.2	5.9	5.6	6.6	7.2	7.3	–
Sweden	2.2	1.9	1.6	1.8	3.1	5.6	9.3	9.6	9.1	9.9
United Kingdom	10.3	8.6	7.3	7.0	8.9	10.1	10.5	9.6	8.8	–

[1] Data for 1994 are not directly comparable with data for 1993 and earlier years. For additional information, see the box note under "Employment and Unemployment Data" in the notes to this section.

[2] Labor force as a percent of the working-age population.

[3] Employment as a percent of the working-age population.

NOTE: See "Notes on the data" for information on breaks in series for the United States, France, Italy, the Netherlands, and Sweden. Dash indicates data not available.

44. Annual indexes of manufacturing productivity and related measures, 12 countries

[1992 = 100]

Item and country	1960	1970	1973	1980	1986	1987	1988	1989	1990	1991	1993	1994	1995	1996
Output per hour														
United States	–	–	–	71.9	88.2	94.3	97.8	97.0	97.7	98.2	101.6	105.8	109.2	112.7
Canada	40.5	60.4	72.2	78.5	92.6	93.5	93.9	94.3	95.8	96.3	101.7	106.2	107.5	108.6
Japan	14.0	38.0	48.1	63.9	76.9	81.2	84.8	89.5	95.4	99.4	100.5	101.8	109.2	114.1
Belgium	17.8	32.7	42.6	64.5	87.6	88.7	91.7	96.7	96.9	99.1	104.1	110.0	109.3	–
Denmark	29.5	52.1	66.1	89.2	90.0	89.6	92.9	96.1	96.0	97.9	106.8	–	–	–
France	23.0	45.5	53.9	70.5	85.2	86.7	92.7	97.4	99.1	98.7	101.8	110.4	114.5	117.0
Germany	29.2	52.1	61.1	77.3	89.5	88.4	91.6	94.4	99.0	102.0	100.4	108.0	111.1	115.7
Italy	19.6	36.8	43.9	64.0	82.6	85.0	86.6	89.4	92.8	95.3	104.5	107.4	110.7	113.3
Netherlands	19.6	38.6	48.9	70.0	91.2	91.9	93.9	97.3	98.6	99.6	102.1	112.1	115.9	–
Norway	36.7	57.8	67.6	76.7	89.0	93.3	92.1	94.6	96.6	97.5	100.6	101.4	102.5	103.3
Sweden	27.6	52.8	62.1	74.0	88.5	90.1	90.8	93.8	95.0	95.0	106.7	116.1	122.0	124.8
United Kingdom	30.5	43.7	51.9	54.9	74.7	78.8	83.1	87.1	90.1	94.4	105.6	108.7	107.7	107.5
Output														
United States	–	–	–	77.4	91.0	97.9	104.4	104.0	102.5	98.8	103.0	109.8	113.6	116.7
Canada	34.2	61.0	77.6	85.9	99.3	104.1	109.4	110.3	106.2	98.7	104.8	112.8	117.1	118.6
Japan	10.7	38.8	50.0	59.9	74.9	78.4	84.6	90.2	96.3	101.4	96.0	95.4	100.5	105.0
Belgium	30.7	57.5	70.6	78.2	89.0	88.7	93.1	98.9	101.0	100.7	96.9	101.4	104.4	–
Denmark	40.1	66.8	78.1	89.7	101.7	97.6	99.1	100.3	99.3	99.2	101.1	103.0	105.9	105.6
France	32.4	66.9	80.1	92.7	91.2	91.1	96.3	101.6	103.5	101.7	96.2	101.3	105.4	106.2
Germany	41.5	70.9	78.5	85.3	89.7	88.0	90.9	94.0	99.1	102.8	91.5	93.1	93.4	92.9
Italy	21.5	44.8	54.1	78.7	84.8	88.5	94.8	98.6	100.4	99.7	96.6	101.9	107.7	106.8
Netherlands	31.8	59.7	67.9	77.6	88.1	89.3	92.7	96.9	100.1	100.6	98.3	103.3	105.8	–
Norway	56.6	89.1	102.2	103.6	108.1	110.7	105.3	101.3	100.2	98.3	102.7	106.7	109.9	112.9
Sweden	46.5	81.7	88.5	91.8	105.2	107.7	110.2	111.6	110.6	103.6	101.3	115.7	127.0	129.8
United Kingdom	68.4	91.2	100.6	88.1	91.1	95.3	102.0	106.6	106.4	100.6	101.4	105.6	108.0	108.5
Total hours														
United States	92.2	104.5	110.5	107.6	103.1	103.9	106.8	107.2	104.9	100.6	101.4	103.8	104.1	103.5
Canada	84.5	100.9	107.5	109.5	107.2	111.4	116.5	117.0	110.8	102.5	103.0	106.2	108.9	109.1
Japan	76.3	102.3	104.0	93.8	97.3	96.6	99.8	100.8	100.9	102.0	95.6	93.7	92.0	92.0
Belgium	172.1	176.3	165.6	121.4	101.6	100.0	101.5	102.3	104.3	101.6	93.2	92.2	95.6	–
Denmark	135.8	128.3	118.1	100.6	113.1	109.0	106.6	104.3	103.3	101.3	94.7	–	–	–
France	140.6	147.0	148.7	131.5	107.2	105.1	104.0	104.4	104.5	103.0	94.5	91.8	92.0	90.8
Germany	142.4	136.1	128.4	110.3	100.1	99.6	99.2	99.5	100.1	100.8	91.1	86.2	84.0	80.3
Italy	109.6	121.8	123.4	123.0	102.7	104.1	109.5	110.2	108.2	104.6	92.4	94.8	97.2	94.3
Netherlands	162.7	154.5	138.7	111.0	96.6	97.2	98.7	99.6	101.6	101.0	96.3	92.2	91.3	–
Norway	154.0	154.3	151.2	135.0	121.6	118.6	114.3	107.1	103.7	100.8	102.1	105.2	107.2	109.3
Sweden	168.3	154.7	142.5	124.0	118.9	119.5	121.4	119.0	116.4	109.0	94.9	99.6	104.1	104.0
United Kingdom	224.4	208.6	194.0	160.3	121.9	120.9	122.7	122.3	118.0	106.6	96.0	97.2	100.3	100.9
Compensation per hour														
United States	14.9	23.8	28.6	55.8	78.6	80.8	84.0	86.8	91.0	95.7	102.4	105.1	108.8	112.0
Canada	10.5	18.3	22.9	50.2	77.5	79.8	83.3	86.4	91.3	97.1	100.1	102.1	103.9	108.5
Japan	4.3	16.5	26.8	58.6	76.1	77.9	79.2	84.2	90.7	95.9	104.6	106.7	110.0	111.6
Belgium	5.5	14.1	21.6	52.5	77.2	79.0	80.6	84.8	89.6	95.3	105.0	108.4	111.7	–
Denmark	4.6	13.2	20.4	49.4	72.9	79.7	82.5	87.2	92.6	96.2	102.4	–	–	–
France	4.3	10.5	14.9	41.3	76.8	79.7	82.7	87.2	91.8	96.3	103.6	106.2	107.7	110.0
Germany	8.1	20.8	29.1	53.8	73.1	76.6	79.6	83.4	89.4	95.1	106.1	112.1	117.5	123.4
Italy	1.6	4.6	7.0	27.9	62.6	66.1	68.7	75.5	84.0	93.1	107.1	106.6	109.2	117.1
Netherlands	6.4	20.4	31.8	64.8	85.2	87.9	87.6	88.4	90.8	95.2	103.8	107.1	109.9	–
Norway	4.7	11.8	17.0	39.0	69.1	78.5	83.3	87.2	92.3	97.5	101.5	104.4	109.2	114.0
Sweden	4.1	10.8	15.2	37.4	63.1	67.3	71.7	79.4	87.6	95.4	98.0	101.1	107.4	114.3
United Kingdom	3.1	6.5	9.7	33.9	59.7	66.3	70.6	75.2	83.5	93.1	106.6	109.9	110.8	115.0
Unit labor costs: National currency basis														
United States	–	–	–	77.6	89.1	85.7	85.9	89.4	93.1	97.5	100.8	99.4	99.7	99.3
Canada	25.9	30.3	31.8	63.9	83.6	85.3	88.7	91.7	95.2	100.9	98.4	96.1	96.7	99.9
Japan	30.9	43.3	55.7	91.7	99.0	96.0	93.4	94.0	95.0	96.5	104.1	104.9	100.7	97.8
Belgium	31.1	43.1	50.6	81.4	88.1	89.1	87.9	87.8	92.5	96.1	100.9	98.6	102.2	–
Denmark	15.5	25.3	30.8	55.3	81.0	89.0	88.8	90.7	96.5	98.3	95.9	97.9	102.2	104.9
France	18.7	23.0	27.6	58.6	90.2	92.0	89.3	89.5	92.6	97.6	101.8	96.2	94.0	94.0
Germany	28.0	39.9	47.6	69.6	81.6	86.7	86.9	88.3	90.3	93.2	105.6	103.9	105.7	106.6
Italy	8.0	12.6	16.0	43.7	75.8	77.8	79.4	84.4	90.5	97.7	102.5	99.2	98.6	103.3
Netherlands	32.9	52.7	65.0	92.6	93.4	95.7	93.3	90.8	92.1	95.5	101.7	95.5	94.9	–
Norway	12.9	20.4	25.1	50.8	77.7	84.1	90.4	92.2	95.6	100.0	100.9	102.9	106.5	110.3
Sweden	14.9	20.5	24.4	50.6	71.3	74.7	79.0	84.7	92.3	100.4	91.8	87.0	88.0	91.6
United Kingdom	10.3	14.8	18.7	61.7	79.9	84.1	84.9	86.3	92.6	98.6	101.0	101.1	102.9	107.0
Unit labor costs: U.S. dollar basis														
United States	–	–	–	77.6	89.1	85.7	85.9	89.4	93.1	97.5	100.8	99.4	99.7	99.3
Canada	32.3	35.1	38.4	66.1	72.7	77.8	87.1	93.6	98.6	106.4	92.1	85.0	85.2	88.5
Japan	10.9	15.3	26.1	51.5	74.5	84.2	92.4	86.3	83.1	90.9	118.8	130.1	135.9	114.0
Belgium	20.0	27.9	41.9	89.6	63.4	76.7	76.8	71.6	88.9	90.4	93.8	94.8	111.5	–
Denmark	13.5	20.4	30.9	59.4	60.4	78.4	79.5	74.8	94.1	92.7	89.2	93.0	110.2	109.1
France	20.2	22.0	32.9	73.5	69.0	81.0	79.3	74.3	90.0	91.5	95.1	91.8	99.8	97.3
Germany	10.5	17.1	28.1	59.9	58.7	75.3	77.2	73.3	87.2	87.7	99.7	100.0	115.3	110.7
Italy	15.9	24.7	34.0	62.9	62.6	73.9	75.1	75.8	93.0	97.0	80.3	75.8	74.6	82.5
Netherlands	15.4	25.6	41.1	82.0	67.1	83.0	83.0	75.3	88.9	89.8	96.2	92.4	104.0	–
Norway	11.3	17.8	27.2	63.9	65.3	77.5	86.1	82.9	95.0	95.7	88.3	90.7	104.5	106.1
Sweden	16.8	23.0	32.7	69.6	58.3	68.5	75.0	76.4	90.8	96.6	68.6	65.7	71.8	79.6
United Kingdom	16.3	20.0	25.9	81.3	66.4	78.0	85.6	80.0	93.5	98.7	85.9	87.7	91.9	94.5

– Data not available.

45. Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]										
	1985	1986	1987	1988	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]
PRIVATE SECTOR[5]											
Total cases	7.9	7.9	8.3	8.6	8.6	8.8	8.4	8.9	8.5	8.4	8.1
Lost workday cases	3.6	3.6	3.8	4.0	4.0	4.1	3.9	3.9	3.8	3.8	3.6
Lost workdays	64.9	65.8	69.9	76.1	78.7	84.0	86.5	93.8	–	–	–
Agriculture, forestry, and fishing[5]											
Total cases	11.4	11.2	11.2	10.9	10.9	11.6	10.8	11.6	11.2	10.0	9.7
Lost workday cases	5.7	5.6	5.7	5.6	5.7	5.9	5.4	5.4	5.0	4.7	4.3
Lost workdays	91.3	93.6	94.1	101.8	100.9	112.2	108.3	126.9	–	–	–
Mining											
Total cases	8.4	7.4	8.5	8.8	8.5	8.3	7.4	7.3	6.8	6.3	6.2
Lost workday cases	4.8	4.1	4.9	5.1	4.8	5.0	4.5	4.1	3.9	3.9	3.9
Lost workdays	145.3	125.9	144.0	152.1	137.2	119.5	129.6	204.7	–	–	–
Construction											
Total cases	15.2	15.2	14.7	14.6	14.3	14.2	13.0	13.1	12.2	11.8	10.6
Lost workday cases	6.8	6.9	6.8	6.8	6.8	6.7	6.1	5.8	5.5	5.5	4.9
Lost workdays	128.9	134.5	135.8	142.2	143.3	147.9	148.1	161.9	–	–	–
General building contractors:											
Total cases	15.2	14.9	14.2	14.0	13.9	13.4	12.0	12.2	11.5	10.9	9.8
Lost workday cases	6.8	6.6	6.5	6.4	6.5	6.4	5.5	5.4	5.1	5.1	4.4
Lost workdays	120.4	122.7	134.0	132.2	137.3	137.6	132.0	142.7	–	–	–
Heavy construction, except building:											
Total cases	14.5	14.7	14.5	15.1	13.8	13.8	12.8	12.1	11.1	10.2	9.9
Lost workday cases	6.3	6.3	6.4	7.0	6.5	6.3	6.0	5.4	5.1	5.0	4.8
Lost workdays	127.3	132.9	139.1	162.3	147.1	144.6	160.1	165.8	–	–	–
Special trades contractors:											
Total cases	15.4	15.6	15.0	14.7	14.6	14.7	13.5	13.8	12.8	12.5	11.1
Lost workday cases	7.0	7.2	7.1	7.0	6.9	6.9	6.3	6.1	5.8	5.8	5.0
Lost workdays	133.3	140.4	135.7	141.1	144.9	153.1	151.3	168.3	–	–	–
Manufacturing											
Total cases	10.4	10.6	11.9	13.1	13.1	13.2	12.7	12.5	12.1	12.2	11.6
Lost workday cases	4.6	4.7	5.3	5.7	5.8	5.8	5.6	5.4	5.3	5.5	5.3
Lost workdays	80.2	85.2	95.5	107.4	113.0	120.7	121.5	124.6	–	–	–
Durable goods:											
Total cases	10.9	11.0	12.5	14.2	14.1	14.2	13.6	13.4	13.1	13.5	12.8
Lost workday cases	4.7	4.8	5.4	5.9	6.0	6.0	5.7	5.5	5.4	5.7	5.6
Lost workdays	82.0	87.1	96.8	111.1	116.5	123.3	122.9	126.7	–	–	–
Lumber and wood products:											
Total cases	18.5	18.9	18.9	19.5	18.4	18.1	16.8	16.3	15.9	15.7	14.9
Lost workday cases	9.3	9.7	9.6	10.0	9.4	8.8	8.3	7.6	7.6	7.7	7.0
Lost workdays	171.4	177.2	176.5	189.1	177.5	172.5	172.0	165.8	–	–	–
Furniture and fixtures:											
Total cases	15.0	15.2	15.4	16.6	16.1	16.9	15.9	14.8	14.6	15.0	13.9
Lost workday cases	6.3	6.3	6.7	7.3	7.2	7.8	7.2	6.6	6.5	7.0	6.4
Lost workdays	100.4	103.0	103.6	115.7	–	–	–	128.4	–	–	–
Stone, clay, and glass products:											
Total cases	13.9	13.6	14.9	16.0	15.5	15.4	14.8	13.6	13.8	13.2	12.3
Lost workday cases	6.7	6.5	7.1	7.5	7.4	7.3	6.8	6.1	6.3	6.5	5.7
Lost workdays	127.8	126.0	135.8	141.0	149.8	160.5	156.0	152.2	–	–	–
Primary metal industries:											
Total cases	12.6	13.6	17.0	19.4	18.7	19.0	17.7	17.5	17.0	16.8	16.5
Lost workday cases	5.7	6.1	7.4	8.2	8.1	8.1	7.4	7.1	7.3	7.2	7.2
Lost workdays	113.8	125.5	145.8	161.3	168.3	180.2	169.1	175.5	–	–	–
Fabricated metal products:											
Total cases	16.3	16.0	17.0	18.8	18.5	18.7	17.4	16.8	16.2	16.4	15.8
Lost workday cases	6.9	6.8	7.2	8.0	7.9	7.9	7.1	6.6	6.7	6.7	6.9
Lost workdays	110.1	115.5	121.9	138.8	147.6	155.7	146.6	144.0	–	–	–
Industrial machinery and equipment:											
Total cases	10.8	10.7	11.3	12.1	12.1	12.0	11.2	11.1	11.1	11.6	11.2
Lost workday cases	4.2	4.2	4.4	4.7	4.8	4.7	4.4	4.2	4.2	4.4	4.4
Lost workdays	69.3	72.0	72.7	82.8	86.8	88.9	86.6	87.7	–	–	–
Electronic and other electrical equipment:											
Total cases	6.4	6.4	7.2	8.0	9.1	9.1	8.6	8.4	8.3	8.3	7.6
Lost workday cases	2.7	2.7	3.1	3.3	3.9	3.8	3.7	3.6	3.5	3.6	3.3
Lost workdays	45.7	49.8	55.9	64.6	77.5	79.4	83.0	81.2	–	–	–
Transportation equipment:											
Total cases	9.0	9.6	13.5	17.7	17.7	17.8	18.3	18.7	18.5	19.6	18.6
Lost workday cases	3.9	4.1	5.7	6.6	6.8	6.9	7.0	7.1	7.1	7.8	7.9
Lost workdays	71.6	79.1	105.7	134.2	138.6	153.7	166.1	186.6	–	–	–
Instruments and related products:											
Total cases	5.2	5.3	5.8	6.1	5.6	5.9	6.0	5.9	5.6	5.9	5.3
Lost workday cases	2.2	2.3	2.4	2.6	2.5	2.7	2.7	2.7	2.5	2.7	2.4
Lost workdays	37.9	42.2	43.9	51.5	55.4	57.8	64.4	65.3	–	–	–
Miscellaneous manufacturing industries:											
Total cases	9.7	10.2	10.7	11.3	11.1	11.3	11.3	10.7	10.0	9.9	9.1
Lost workday cases	4.2	4.3	4.6	5.1	5.1	5.1	5.1	5.0	4.6	4.5	4.3
Lost workdays	73.2	70.9	81.5	91.0	97.6	113.1	104.0	108.2	–	–	–

See footnotes at end of table.

45. Continued—Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]										
	1985	1986	1987	1988	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]
Nondurable goods:											
Total cases	9.6	10.0	11.1	11.4	11.6	11.7	11.5	11.3	10.7	10.5	9.9
Lost workday cases	4.4	4.6	5.1	5.4	5.5	5.6	5.5	5.3	5.0	5.1	4.9
Lost workdays	77.6	82.3	93.5	101.7	107.8	116.9	119.7	121.8	–	–	–
Food and kindred products:											
Total cases	16.7	16.5	17.7	18.5	18.5	20.0	19.5	18.8	17.6	17.1	16.3
Lost workday cases	8.1	8.0	8.6	9.2	9.3	9.9	9.9	9.5	8.9	9.2	8.7
Lost workdays	138.0	137.8	153.7	169.7	174.7	202.6	207.2	211.9	–	–	–
Tobacco products:											
Total cases	7.3	6.7	8.6	9.3	8.7	7.7	6.4	6.0	5.8	5.3	5.6
Lost workday cases	3.0	2.5	2.5	2.9	3.4	3.2	2.8	2.4	2.3	2.4	2.6
Lost workdays	51.7	45.6	46.4	53.0	64.2	62.3	52.0	42.9	–	–	–
Textile mill:											
Total cases	7.5	7.8	9.0	9.6	10.3	9.6	10.1	9.9	9.7	8.7	8.2
Lost workday cases	3.0	3.1	3.6	4.0	4.2	4.0	4.4	4.2	4.1	4.0	4.1
Lost workdays	57.4	59.3	65.9	78.8	81.4	85.1	88.3	87.1	–	–	–
Apparel and other textile products:											
Total cases	6.7	6.7	7.4	8.1	8.6	8.8	9.2	9.5	9.0	8.9	8.2
Lost workday cases	2.6	2.7	3.1	3.5	3.8	3.9	4.2	4.0	3.8	3.9	3.6
Lost workdays	44.1	49.4	59.5	68.2	80.5	92.1	99.9	104.6	–	–	–
Paper and allied products:											
Total cases	10.2	10.5	12.8	13.1	12.7	12.1	11.2	11.0	9.9	9.6	8.5
Lost workday cases	4.7	4.7	5.8	5.9	5.8	5.5	5.0	5.0	4.6	4.5	4.2
Lost workdays	94.6	99.5	122.3	124.3	132.9	124.8	122.7	125.9	–	–	–
Printing and publishing:											
Total cases	6.3	6.5	6.7	6.6	6.9	6.9	6.7	7.3	6.9	6.7	6.4
Lost workday cases	2.9	2.9	3.1	3.2	3.3	3.3	3.2	3.2	3.1	3.0	3.0
Lost workdays	49.2	50.8	55.1	59.8	63.8	69.8	74.5	74.8	–	–	–
Chemicals and allied products:											
Total cases	5.1	6.3	7.0	7.0	7.0	6.5	6.4	6.0	5.9	5.7	5.5
Lost workday cases	2.3	2.7	3.1	3.3	3.2	3.1	3.1	2.8	2.7	2.8	2.7
Lost workdays	38.8	49.4	58.8	59.0	63.4	61.6	62.4	64.2	–	–	–
Petroleum and coal products:											
Total cases	5.1	7.1	7.3	7.0	6.6	6.6	6.2	5.9	5.2	4.7	4.8
Lost workday cases	2.4	3.2	3.1	3.2	3.3	3.1	2.9	2.8	2.5	2.3	2.4
Lost workdays	49.9	67.5	65.9	68.4	68.1	77.3	68.2	71.2	–	–	–
Rubber and miscellaneous plastics products:											
Total cases	13.4	14.0	15.9	16.3	16.2	16.2	15.1	14.5	13.9	14.0	12.9
Lost workday cases	6.3	6.6	7.6	8.1	8.0	7.8	7.2	6.8	6.5	6.7	6.5
Lost workdays	107.4	118.2	130.8	142.9	147.2	151.3	150.9	153.3	–	–	–
Leather and leather products:											
Total cases	10.3	10.5	12.4	11.4	13.6	12.1	12.5	12.1	12.1	12.0	11.4
Lost workday cases	4.6	4.8	5.8	5.6	6.5	5.9	5.9	5.4	5.5	5.3	4.8
Lost workdays	88.3	83.4	114.5	128.2	130.4	152.3	140.8	128.5	–	–	–
Transportation and public utilities											
Total cases	8.6	8.2	8.4	8.9	9.2	9.6	9.3	9.1	9.5	9.3	9.1
Lost workday cases	5.0	4.8	4.9	5.1	5.3	5.5	5.4	5.1	5.4	5.5	5.2
Lost workdays	107.1	102.1	108.1	118.6	121.5	134.1	140.0	144.0	–	–	–
Wholesale and retail trade											
Total cases	7.4	7.7	7.7	7.8	8.0	7.9	7.6	8.4	8.1	7.9	7.5
Lost workday cases	3.2	3.3	3.4	3.5	3.6	3.5	3.4	3.5	3.4	3.4	3.2
Lost workdays	50.7	54.0	56.1	60.9	63.5	65.6	72.0	80.1	–	–	–
Wholesale trade:											
Total cases	7.2	7.2	7.4	7.6	7.7	7.4	7.2	7.6	7.8	7.7	7.5
Lost workday cases	3.5	3.6	3.7	3.8	4.0	3.7	3.7	3.6	3.7	3.8	3.6
Lost workdays	59.8	62.5	64.0	69.2	71.9	71.5	79.2	82.4	–	–	–
Retail trade:											
Total cases	7.5	7.8	7.8	7.9	8.1	8.1	7.7	8.7	8.2	7.9	7.5
Lost workday cases	3.1	3.2	3.3	3.4	3.4	3.4	3.3	3.4	3.3	3.3	3.0
Lost workdays	47.0	50.5	52.9	57.6	60.0	63.2	69.1	79.2	–	–	–
Finance, insurance, and real estate											
Total cases	2.0	2.0	2.0	2.0	2.0	2.4	2.4	2.9	2.9	2.7	2.6
Lost workday cases	.9	.9	.9	.9	.9	1.1	1.1	1.2	1.2	1.1	1.0
Lost workdays	15.4	17.1	14.3	17.2	17.6	27.3	24.1	32.9	–	–	–
Services											
Total cases	5.4	5.3	5.5	5.4	5.5	6.0	6.2	7.1	6.7	6.5	6.4
Lost workday cases	2.6	2.5	2.7	2.6	2.7	2.8	2.8	3.0	2.8	2.8	2.8
Lost workdays	45.4	43.0	45.8	47.7	51.2	56.4	60.0	68.6	–	–	–

[1] Data for 1989 and subsequent years are based on the *Standard Industrial Classification Manual*, 1987 Edition. For this reason, they are not strictly comparable with data for the years 1985–88, which were based on the *Standard Industrial Classification Manual*, 1972 Edition, 1977 Supplement.

[2] Beginning with the 1992 survey, the annual survey measures only nonfatal injuries and illnesses, while past surveys covered both fatal and nonfatal incidents. To better address fatalities, a basic element of workplace safety, BLS implemented the Census of Fatal Occupational Injuries.

[3] The incidence rates represent the number of injuries and illnesses or lost workdays per 100 full-time workers and were calculated as (N/EH) X 200,000, where:
N = number of injuries and illnesses or lost workdays;
EH = total hours worked by all employees during the calendar year; and
200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

[4] Beginning with the 1993 survey, lost workday estimates will not be generated. As of 1992, BLS began generating percent distributions and the median number of days away from work by industry and for groups of workers sustaining similar work disabilities.

[5] Excludes farms with fewer than 11 employees since 1976.

– Data not available.

46. Fatal occupational injuries by event or exposure, 1992–95

Event or exposure[1]	Fatalities				
	1992	1993	1994	1995	
	Number	Number	Number	Number	Percent
Total	6,217	6,331	6,632	6,210	100
Transportation incidents	2,484	2,501	2,762	2,560	41
Highway	1,158	1,243	1,343	1,329	21
Collision between vehicles, mobile equipment	578	657	654	634	10
Moving in same direction	78	99	120	125	2
Moving in opposite directions, oncoming	201	244	230	244	4
Moving in intersection	107	123	144	97	2
Vehicle struck stationary object or equipment	192	190	255	268	4
Noncollision	301	336	373	350	6
Jackknifed or overturned—no collision	213	237	274	260	4
Nonhighway (farm, industrial premises)	436	392	409	388	6
Overturned	208	212	226	210	3
Aircraft	353	282	426	278	4
Worker struck by a vehicle	346	365	391	385	6
Water vehicle	109	120	94	84	1
Railway	66	86	81	82	1
Assaults and violent acts	1,281	1,329	1,321	1,262	20
Homicides	1,044	1,074	1,080	1,024	16
Shooting	852	884	934	754	12
Stabbing	90	95	60	67	1
Other, including bombing	102	95	86	203	3
Self-inflicted injury	205	222	214	215	3
Contact with objects and equipment	1,004	1,045	1,017	915	15
Struck by object	557	566	590	546	9
Struck by falling object	361	346	372	340	5
Struck by flying object	77	82	68	63	1
Caught in or compressed by equipment or objects	316	309	280	255	4
Caught in running equipment or machinery	159	151	147	131	2
Caught in or crushed in collapsing materials	110	138	132	99	2
Falls	600	618	665	643	10
Fall to lower level	507	533	580	573	9
Fall from ladder	78	76	86	97	2
Fall from roof	108	120	129	142	2
Fall from scaffold	66	71	89	82	1
Fall on same level	62	49	63	50	1
Exposure to harmful substances or environments	605	592	641	598	10
Contact with electric current	334	325	348	347	6
Contact with overhead powerlines	140	115	132	139	2
Contact with temperature extremes	33	38	50	55	1
Exposure to caustic, noxious, or allergenic substances	127	115	133	101	2
Inhalation of substances	83	68	84	62	1
Oxygen deficiency	111	111	109	94	2
Drowning, submersion	78	89	89	74	1
Fires and explosions	167	204	202	208	3
Other events or exposures[2]	76	43	24	24	–

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

[2] Includes the category "Bodily reaction and exertion."

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate less that 0.5 percent or data that are not available or that do not meet publication criteria.

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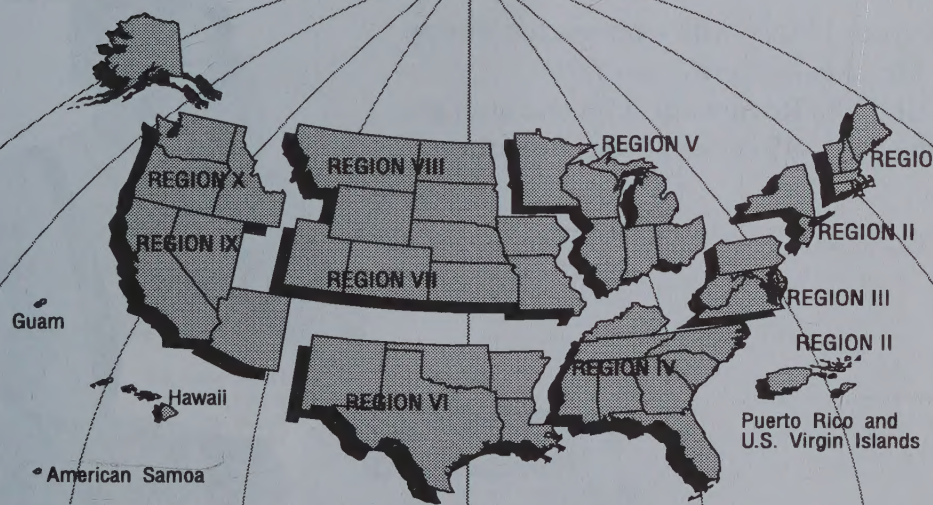

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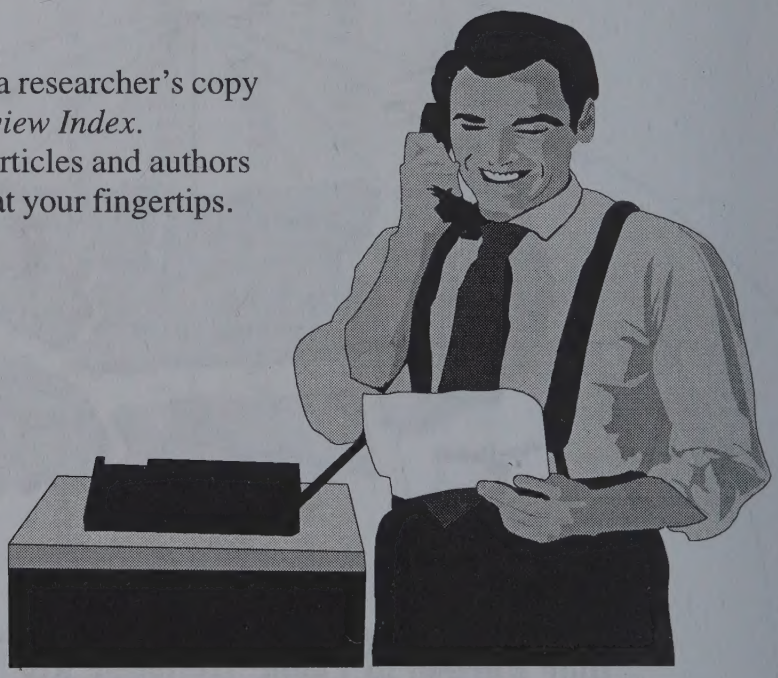

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Schedule of release dates for BLS statistical series

Series	Release date	Period covered	Release date	Period covered	Release date	Period covered	MLR table number
Employment situation	November 7	October	December 5	November	January 9	December	1; 4–20
Productivity and costs	November 13	3rd quarter	December 4	3rd quarter			2; 38–41
Producer Price Indexes	November 14	October	December 12	November	January 8	December	2; 30–32
Consumer Price indexes	November 18	October	December 16	November	January 13	December	2; 27–29
Real earnings	November 18	October	December 16	November	January 13	December	13–16
U.S. Import and Export Price Indexes	November 19	October	December 11	November	January 14	December	33–37
Employment Cost Indexes					January 27	4th quarter	1–3; 21–24